

NMA

THE NMA (National Music Association) is a non-profit organization that promotes the development of the music industry. It was founded in 1958 and is headquartered in New York City. The NMA's primary focus is on the promotion of the music industry, which includes the creation of new music, the development of the music business, and the promotion of the music industry's interests. The NMA's activities include the creation of new music, the development of the music business, and the promotion of the music industry's interests. The NMA's activities include the creation of new music, the development of the music business, and the promotion of the music industry's interests.

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new music articles

Editorial

This issue is primarily concerned with theorising the emerging field of aurality - a field which encompasses both diverse aural, audiophonic and musical forms: soundscape/sculpture, new music, audio and radio art; as well as their associated, although often opposing discourses: musicology, literary and film theory, philosophy, cultural criticism and aesthetics. Like any explorations into relatively uncharted territory, such theoretical journeying will always involve a departure from the past; a departure that is, from the now inadequate discourses and rhetorics which have historically governed the way aurality is both appreciated and articulated. It is within this context that the writers for this collection derive their particular relevance, since each is devoted to the analysis of certain key issues, or the elaboration of particular conceptual devices, which are essential for the development of both a critique of the many myths surrounding theories of aurality, and a discourse or critical field able to address the aural manifold in all its contemporary manifestations.

Densil Cabrera for instance, in arguing for a conception of musical notation as recording, raises the question of technological intervention in the prerecording era, that is, in an era to which romantic notions of music and composition, most often featuring the proximity of the composer to the work, have been ascribed. If notation can be considered a technology, then to some extent the romantic vision, with its nostalgic currency in contemporary mass produced culture, breaks down, providing room for a reconceptualisation of the relationships between technology and artistic practice. Ian Andrews, by tracing the movement of music through the social and the haptic via the discourses of psychoanalysis and semiology, indicates a way of thinking about the production of music as contributing to both the institutions of consumerism and the active dismantling of the codes and prohibitions such institutions generate, through the body's response in dance. Within this analysis, music, and in particular the record, becomes both a means for social control and paradoxically, an agent for liberation.

This ambivalence, between the phenomenal and cultural aspects of music, is elaborated by Ashley Scott, however not in terms of music as a commodity, but in terms of the internal organisation of music and sound itself. By offering a concept of composition as the organisation of differing phenomenal aural planes and intensities, Scott gestures towards the beginnings of a 'musicated phenomenality', or a 'phenomenal music' which dissolves the distinction between organised and disorganised, metaphysical and phenomenal structures, inserting instead a 'structural affectation' of listening. By contrast Richard Vella adopts an approach referring to the discourse of musical hermeneutics in his analysis of a method of reading which incorporates musical structure within the interpretative context, thereby problematising the intra/extra musical dichotomy which has so plagued some areas of musicology.

The aesthetics and hermeneutics of music and aurality receive similar recognition in the application of conceptual mappings to actual or imaginary acoustic spaces. For instance, Sherre Delys poeticises the erotic space of the telephone, while Joan Brassil's positioning of her work within the field and discourse of phenomenology provides a theoretical avenue for approaching sound literally in the space of sculpture. Ruark Lewis' detailing of a possible sonorous architecture; an architecture composed of and by the resonance of objects, applies the notion of an intentional, multifaceted organisation of sound, sound very clearly in the abstract, to the everyday domestic sphere. Douglas Kahn probes the aesthetic possibilities of sculpting sound following the contours of Duchamp's hypothesised acoustic Venus de Milo, while returning again to notions of recording and phonography in his portrayal of the resonant spaces of vocalisation. Finally, my own contribution attempts to position the listening body within audiophonic transmission and the ethereality of the airwaves.

While much of the material constituting this collection is theoretical, abstract and at times perhaps obscure, the contributors are not simply writing 'off the top of their heads'. As the cassette which accompanies this issue indicates, all are actively engaged in producing sound and music for radio, performance, tape and installation, and it is from their practice that such theory accumulates relevance. Indeed, this is one of the characteristics of the emerging discipline of sound theory - nearly all of its proponents are artists who were perhaps originally motivated by the desire to set their practice within the discursive arena, but have since discovered the deeper cultural and metaphysical consequences of theorising the aural. I hope that the reader enjoys unravelling these consequences as much as I have enjoyed following their peripatetic logic.

- F.D.

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Acoustic Sculpture, Deboned Voices

Douglas Kahn

In his **Notes** Marcel Duchamp proposes an acoustic drawing of an human profile and an acoustic sculpture of Venus de Milo.

Develop: one could, after training the listener's ear, succeed in drawing a resembling and recognisable profile -- with more training make large sculptures in which the listener would be a center -- For ex. an immense Venus de Milo made of sounds around the listener -- This probably presupposes an aural training from childhood and for several generations.

[on the side]

...after the Venus de Milo there would be an infinity of other transformations more inte--

Instead of addressing technological requirements, he comments only upon perceptual training; nonetheless, in his notes to the Green Box he gives clue.

Musical Sculpture

Sounds lasting and leaving from different places and forming a sounding sculpture which lasts.²

Forget, for the time being, ideas of space as musical structure, form, sculpting a phrase and confront directly the provocation of the static three-dimensional sculptural figure. Eliminate also musical analogies within sculpture itself and concentrate cold upon the mute classicism of the Venus de Milo.

An actual Venus de Milo exists and can thus be found and transformed from stone to sound. This transformation does not result in the damage accompanying a reciprocal readymade (a Rembrandt as an ironing board), or the degradation of a moustache; neither is it a form of hair removal nor any other type of removal. It is produced by transposing two sensory registers, a parodic synaesthesia (in a vibratory medium of semiosis), hearing visual images or seeing sound, in which presence and absence are never fully commensurate. Even the best attempt will result in a snarl of rubble and dust hanging ungainly in hum and clamour. This sensory resistance provides a fruitful arena within which to situate Duchamp's Venus, especially as it speaks to his fascination with the fourth dimension, say, in an echo of space *per se*. Although this would be the obvious thing to do, I am not concerned here with interpretation of sculpture but with its construction.

In this construction process, the acoustic Venus replaces the stone version to become the found object. The original is of little importance; we must dis-

embark from the copy, from the second generation. First, however, the copy must be found, the second generation generated; from there there could be an infinity of other transformations more interesting. Once this process is underway it quickly becomes clear that the impossibility of Duchampian acoustic sculpture does not preclude its general mass production. The production of acoustic sculpture does not, as Duchamp suggested, rely upon intensive perceptual training over several generations to exist but existed during and before his own generation. It is, instead, reliant upon understanding the construction of acoustic sculpture as both a sculptural and speculative act, as hermeneutic and technological, figurative and perceptual. It is also important to understand that one cannot speak of acoustic sculpture without creating it (there may be baffles but no insulation) and that at all times this implication in its production interferes with and destroys the sculpture as quickly as it is created.

To begin with what would the commonsensical approach be? The easiest way to generate sound staying in one place in space is with a standing wave, i.e., tuning a simple sinusoidal wave form to reflect back congruently upon itself. However, to detect the contours of the sound the listener must bodily interrupt the stasis of the wave, scattering it, thus destroying any sculptural effect. Besides, standing waves are too ungainly and unhewn for the purposes of figurative sculpture. Likewise, if a complex acoustical 'holography' were utilised, it wouldn't matter that, per Duchamp's instructions, the Venus were amplified or inflated bigger than the listener. It may be thought that the listener would not interrupt the sculptural surfaces while standing inside them, and that from this vantage point there could be exploratory interruptions of the skin from the inside, interrupting it here and there then letting the sound waves reconfigure. With enough prodding, or systematic scanning with a finger, there might come about a kinaesthetic determination of the sculpture. But inner silence is deceptive. Her volume is constituted of the presence of waves busily canceling themselves out, not of the absence of waves. Therefore, any attempt to take up an inside position ends in mass destruction.

One method to gain some distance, in order to perceive the sculpture without bodily interrupting it, involves echolocation, the bat-like perception of the position, movement, contours and textures of the surface of an object as it reflects sound. Echolocation is an active form of listening where an utterance is transformed and returned, the variance from the original rendering the object location and definition. To hear the sculpture you must contribute to its con-

struction, working off the difference between your original utterance and what reflects back to you. The reflection is gauged by the substance of the sound and the difference within it encountered, in a process of triangulation, between your ears. These nearly spontaneous determinations register the nature of the interference caused by the original utterance by noticing how much of it was absorbed or deflected and how this was patterned. Say you enter a room in an art gallery that Duchamp or someone else has set up an array of sound-generating devices coordinated so the sound lasts and leaves from different places. It would probably seem just like a normal noisy room. Your role would be to elicit sounds with your mouth that would interact precisely with the sounds in the room resulting in an acoustic Venus de Milo. The difficulty for the artist would be to tune the sound-generating devices in proper anticipation of a

ing from childhood and for several thousand generations. It occurs when they hear their own voices and every time you hear your own voice every time you speak. Selfsame speech, i.e., hearing one's own voice operates in ironic fashion both silently and centrally. It is as unacknowledged and seemingly natural as phatic speech at the grocery store or eucharist but serves to buttress Western metaphysics by mouthing the crux of authenticity, origination, self, the moment, etc. At its most commonplace, i.e., in speech communication (monologue or dialogue) with another person or other people, hearing one's own voice is at once the most widespread private act performed in public and the most common public act experienced within the comfortable confines of one's own body. Experiences within the supple tides of such commonplaces apply directly to the quick give-and-take, near congruency of the coordination of ut-



range of audience input. The difficulty for the listener would be to utter interference with the sound waves emanating from these devices in order to form a sculpture, while at the same time assuring that sound waves are reflected back off of the sculpture to be returned to the ears for binaural localisation.

Questions quickly arise. How would the person know if the artist's intentions were being fulfilled? How would the echolocation adept know whether the correct sculpture was formed; an acoustic Brancusi could be conjured up by mistake. Could the echolocation adept transform any acoustic environment, for instance, transform the noise of a crowd into architecture? What about group listening situations where sculpting would demand a stringent choral coordination? In this respect, a sports crowd should drop *The Wave* and instead set tenacious acoustic obstacles against the opposing team or create their own half-time shows replete with Venuses in blue jeans, Mona Lisas with pony tails. But can these rigors be conducted by a crowd of tens of thousands of fans, can choral coordination be acquired *en masse*, or is echolocation an elite activity?

A great majority of individuals are already adept at the type of coordination of vocalising and listening required for echolocation, having faithfully rehearsed the craft day in and day out for years, an aural train-

terance and audition in echosculpting. Moreover, any commonplace whatsoever intrinsically lends itself the construction project at hand for one reason: it figures.

Selfsame speech enters into a complex overlapping with the other endophony: inner speech. At times thought has no vocation to speak of; other times the organs are relaxed while inner speech vociferates; other times laryngeal palpitations, lingual fidgets and wispy lung purls evidence a fitful dormancy of speech; other times outright internal debates let loose upon the world with no interlocutory intent. Nascent speech can also occur on, to the extent it exists, the receiving end, during the transmissives of comprehension, while reading, here, while listening to another person speak or sing or groan, or while listening to any sound for that matter. It can thus recuperate the audible and audiblisable world tempered with a self same tone. The way selfsame speech can model and transmit thought and simultaneously recuperate sounds of the world is, of course, very important for developing echolocative sculptural techniques, in fact, it becomes very difficult to know when an acoustic Venus is not being unconsciously generated or if the world may not already be cluttered with them.

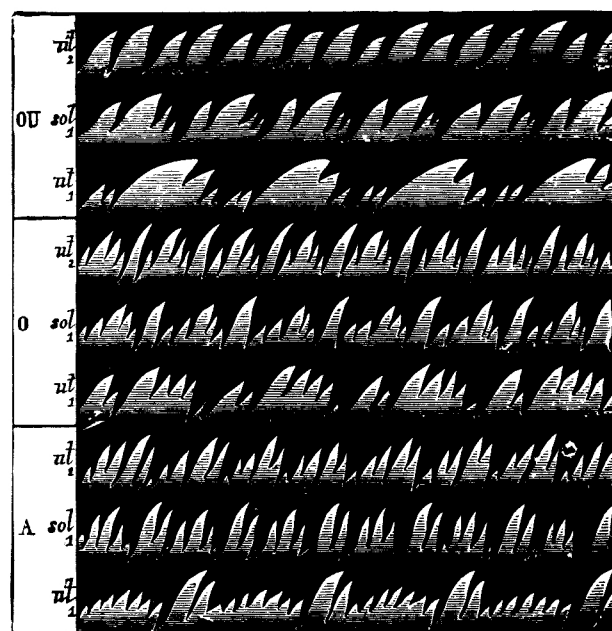
Also present in selfsame speech is a unique sense

organ, one modeled by the union of utterance and audition. Physiologically separate, the ears and organs of speech, are functionally combined during selfsame speech. It is not merely 'hearing one's own speech,' the notion that first springs to the lips, but also 'speaking one's own hearing.' Sense organs are usually known for their acts of reception, for example, eyes receive but don't project light; and it is true that while hearing other sounds besides one's own voice the ears will perhaps be cognitively directed within the sphere of attention but will not extrapolate upon this gentle gesture into full-blown projection. But when one speaks the unified utterance/audition sense organ listens to edit speech, then releases a speech that is authored in significantly by listening. The ear has a voice in the matter. All speech is a plague of otorhea. When light is emitted by the eyes during mystical and ecstatic states, just as eyes once served willingly as ample spigots for Mesmeric fluid, it is a private experience, no one else sees the light projected, although the teenage neuropath Raymond Roussel, during his ecstasy while writing *La Doublure*, did close his drapes just to make sure the neighbors wouldn't notice. Selfsame speech, projective listening, has its overtly public component, a rhetoric, to be sure, but it is not thereby completely severed from the same type of hallucinatory projection of ecstatic vision. It is a hallucination not at a loss without the *luce*. Neither speech nor otorhea is privileged in this figment but are coordinated to sculpt anytime anyplace with no need of sounds lasting and leaving from anywhere else. And there is some assurance for public recognition because the neighbors hallucinate in the same, collective if not communicative, way.

The activity of the union organ provides a corporeality conducive to sculpture, a body to listening. As the saying goes, you hear other people's voices in your ears and your own voice in your throat. Thus, when one speaks the body itself is both uttered and heard kinaesthetically; resulting in a sense of containment that delivers objecthood to the sonic ephemerality of the voice. Words and vocables will come and go but the throat remains. One way to sense containment is to hold a low pitch drone and feel the vibrations in your chest, neck and skull -- a classical acoustical bust on a fleshy pedestal. To speak, therefore, is to begin to sculpt a Venus de Milo in the neck. Leave the arms off to avoid choking. It may not be a full body length sculpture like the Venus de Milo although it certainly demonstrates the beginnings of a robust artistic practice and there are methods to materialise the union organ more completely downward. For example, the sculptural body grows through ventriloquy. Long known as belly speech or stomach voicing, in ancient times ventriloquists were known as belly prophets, ruminating before speech, thus the oracular connection with the bowels of the earth. Ventriloquy thus activates the speaker's inwards lower than the acoustic bust vibrated by a drone. It also alludes to the body talk of other ventricles, most prominently, the heart's ventricular chamber which, when coordinated with the auricular chamber, breeds echosculpting practice pulsating with feeling. The additional benefit of ventriloquy is that the voice is thrown, throwing deep regions of the

body immediately outside the body. As the voice is thrown, so goes the union organ, with its hallucinatory bulk in a twinning connected along the mouth, cheek and ear, acute to the nape, producing the familiar semblance of the highly erotic two-backed sculpture whose abandoned union reiterates the unacknowledged union of utterance and audition.

The twinning effect is already inherent in a pair of normally functioning ears. Acupuncture auricular charts depict phantom embryos residing in upside down position on either side of the head. The points along their miniature bodies correspond in inverted focus to the gargantuan corpus gingerly suspended between them, each ear symmetrically harboring a hanging side of beef. Thus, for example, the feet are



at the top of the ears, the eyes in the lobes. When the fleshy horns of the ears cease being hearing trumpets alone to join the union organ they become labial and speak, two foetal halves plus the mouth, in a duo. Musical instruments have long simulated this interchangeable, mutually prosthetic impulse, e.g., physiologically like Leonardo's glissando flute modelled on the larynx or animistically like bagpipes, with their bladder-lungs disgorged from the lower depths, an effect displayed by the stomachs of deep sea bottom fish when brought by hook-and-line quickly to the depressurised environs of the surface. Union organs are also deployed from within other areas of the body, where their sounds last and leave and return. The outer ears, the horns, are French butterflies whose wings are echoed in the pelvic wings, where dance is heard. Judge Schreber heard demons in his feet; Helen Keller heard applause in her toes; soul music fastens the whole body together. All act to construct Duchamp's Venus in analogue; the only sound not accomplishing this feat is digital.

Twinning, whether replicated in the body or disgorged from it while still attached to it, demonstrates a real feel for the art but generally does not produce

the distance needed for echolocation. The preferred technology for separation is the phonograph. The phonograph can modulate any distance of the selfsame voice from the body, from a light metal plating on the eardrums to an envoy lost outside the solar system. It repeats infinitely in theory and thus sound can be sustained in a manner amenable to the stasis of sculpture. The phonograph is the first technology for the selfsame voice. To make this claim, however, the phonograph must be differentiated from the echo, the only pre-phonographic method to hear one's own voice. Since classical times, if not before, echoes have aspired toward ability to sustain the return, the lasting of the leaving, enjoyed by phonography. It was told that an "echo from a tower near the Aventine Hill in Rome could repeat the entire first verse of the *Aenid* eight times."³ A field surrounded by Aventine Hills might provide perfect site for acoustic earthworks but the seventeenth century Franciscan friar Marin Mersenne (1588-1648) already demonstrated the impossibility of this claim within his field of echometry and, much earlier, the myth of Echo already denied such sustained response. Juno was not amused by Echo's deceit so she was punished in the terms of her conversational prowess; always having the last word she was forced to speak only last words and only when spoken to. She did retain a certain discursive autonomy but had difficulty in communicating it because she suffered from a classic case of echolalia (which has reached epidemic proportions in 'enough already'). She also suffered from a body turned to stone. Her suffering would have, with little effort, made great acoustic sculpture but she tends to elude exact location.

Like Echo echoes are doomed to repeat short outbursts or have their longer utterances interfere with themselves, leaving only trailing fragments (normally the weakest in the animal kingdom) to be repeated unimpeded. Echoes are, however, conducive to a spatial linguistics that can aid the front-end of echolocation by giving some body to utterance. Depending upon the duration of speech and where the speaker is standing the echo will breakdown the tail end of the utterance to smaller and smaller, syntactic, morphemic or phonemic elements. Mersenne practiced reciting *Benedicam Dominum* precisely within one second. He then placed himself at varying distances in Royal feet from a wall and noticed whether any syllables, that is one-sevenths of a second, were returned. He not only approximated the speed of sound by this device but also determined how many feet were in a syllable, and ostensibly could have calculated the true length of poetic meter. He also marshalled echometry to contest the notion that echoes spoken in French might be returned in Spanish although, "he almost convinced himself that one could devise a special series of sounds whose echo might lead a listener to *think* he had heard the response in a different language."⁴ Bilingual echoes are only possible if the interference of the words reflecting upon themselves resulted in a distinctive language. The difficulty of such orchestration arises because words are not echoed in a visualist manner, as if there was an acoustic mirror, they are returned in the same sequence they are sent. Interference operates through delays and phasing, which immedi-

ately alerts us to the danger of musicalisation. While on a geological survey of Maine, Dr. Charles Thomas Jackson tested the echo of Saddleback Mountain, as it stood covered in snow behind a large swampy area; all shouts and noises were returned as music. "A fierce Indian war whoop was returned to us in the softest musical tones, not one of the discords being heard."⁵ Perhaps one could devise a special series of musical sounds whose echo might lead a listener to *think* he or she had heard the response in spoken language, perhaps a description of the Venus de Milo. There could be music that, when properly performed against a wall or a difficult audience, would detail instructions in how to construct the Venus, e.g., would recite this paper. This process of a coupled linguistic and spatial interference, an animation of echolalic fragments, could easily be brought to bear upon Duchamp's preliminary project of drawing a resembling and recognisable profile, with lips that move or with lips that move and speak in conversation, confession or cure, to the utterances that echo-created the profile.

Unlike echoes, the phonograph can sustain the voice, return discourse unfragmented in articulate matter and not just particulate matter and can return the voice from different places, lasting and leaving from different times, and form a sound which lasts. The phonographic voice existed long before the phonograph but not as echoes; it is the sound of another's voice. Your own phonographic voice is alien while another's voice is familiar. As the saying goes, you hear your own voice in your throat and your own phonographic voice in your ears. When speaking to other people the head resonance you hear is not heard by other people. Your voice leaves your lips without its skull; it is a deboned voice. When you hear your own speaking voice the bones are in place. The bones in question are those involved in the conduit channeling the voice up from the throat through the mandible and skull, vibrating the basilar membrane in the same way as air-conducted hearing. The phonographic, deboned voice is the selfsame voice heard without bone conductivity, the voice rebounds gelatinously, and thus approaches the desired transformation of stone to sound, as though the Venus met with a Medusa-in-reverse, creating a *debona fide* Venus de Milo. Edison was known to bite down upon the horn of the phonograph to better hear its output; he was simply reconnecting the bone circuit. Air-conducted hearing is not without bone conduction, but the conduction of the hammer, anvil and stirrup is not of the order of hearing one's own speech. In fact, during speech vibrations along the path of the tiny bones are attenuated by the stapedius muscle, just as when it reacts to high intensity sounds from the environment, thus deploying the audition of one's own voice more completely to the route of other bones. When you speak you become a little deaf to the world.

There have been a number of clinical studies of bone conduction and the selfsame voice; one set of tests used headphones filled with 100 decibels of white noise (an autophonic voice bone dissolver) to mask the bone conduction of verbal responses to different visual images, including two paintings by De Chirico.⁶ Hearing one's own voice in these experi-

ments was related to editing and control of speech; in some circumstances when control was masked subjects displayed various forms of automatism.

For some, *not* hearing one's own speech might facilitate the intrusion of peripheral lines of thought into the speech sequence, perhaps encouraging automatic talking analogous to automatic writing. Removal of auditory feedback may thus promote detachment and unconcern with reality constraints and an introspective involvement in the flow of one's thinking.

The automatism of a deboned voice conjures up the image, contemporary with Duchamp's notes, of the decapitated, suspended and deboned head of Danton in Roussel's **Locus Solus**. The inventor Martial Canterel, the novel's thinly disguised Edison, leads an entourage around his estate Locus Solus, a thinly disguised Menlo Park, presenting a miraculous array of creations. Early on the tour the group is led to where, while suspended in a vat of highly oxygenated clear fluid, Danton's head, bereft of skin and bones, is reanimated into fidgety oratory by a hairless Siamese cat sporting a tin funnel on its snout by which it directs its amplified animal magnetism. Danton's head could likewise be suspended by means of historiographic echolocation, a chattering library, shelved voices leaving from different places and different times in the nineteenth century, with its automatic voices of spiritualism, hypnosis and hysteria, with its reanimation of dead voices by phonography, electricity and seance, with its terrestrial creatures submerged and breathing in aether, mesmeric fluids and gels and hallucinatory hashish jellies, with its cortical localisation of speech and electro-stimulation of the brain dependent upon skull removal, etc.

Danton reanimated as a talking fillet lacked the vent of an acoustic voice; his oratorical splendour had to be read graphically off his moving lips, sounding

like the inscription of any phonographic voice having left from a different time and different place in the form of writing which lasts. The early incidence of the phonograph prompted speculation upon the prospects of sustaining voices, not just their words, past their owners' death. This in turn prompted speculation about conducting oral history with the dead, introducing the possibilities for an unacknowledged choral effect during an otherwise pedestrian echosculpting task and for echosculpting from the grave. During the same period demonstrations of the phonograph brought charges of ventriloquy, a speech vented from buried places. The phonograph also siphons off acoustic and sculptural space into an inscription etched into hard material, following Echo's reduction of her body to stone. Inscription can be lodged in tin, stripped like metallic parchment from an early cylinder phonograph, at which point it becomes a simple craft to form into a *bona fide* Venus de Milo draped in a skin of sounds coming from different places, their jagged lines read like pages in a book with their bodies of text, footnotes and off-handed remarks.

A version of this talk was given at The Lab, San Francisco, January 31 1990. Many thanks to Frances Dyson and Gregory Whitehead.

Footnotes

1. Marcel Duchamp, **Notes** GK Hall and Co., Boston 1983. Note no. 183.
2. Marcel Duchamp, **The Writings of Marcel Duchamp** Da Capo Press, New York p31.
3. Frederick Vinton Hunt, **Origins in Acoustics** Yale University Press New Haven, 1978, p96.
4. Hunt p96.
5. William R. Corliss, **Handbook of Unusual Natural Phenomena** Arlington House New York, 1983, p397.
6. George Klein, "On Hearing One's Own Voice: An Aspect of Cognitive Control in Spoken Thought" in **Perception, Motives and Personality** Alfred A Knopf, New York, 1970. p343-4.
7. Klein p.340

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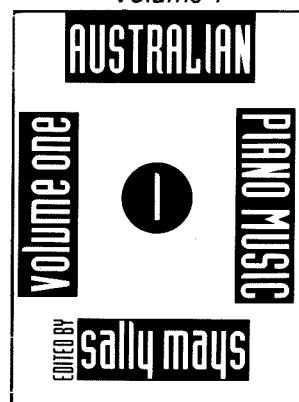
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Recording & music notation as 'artificial' memory and thought

Densil Cabrera

Memory is a prerequisite for meaning. Through memory we can establish a network of associations linking and defining a perceived event, thereby generating meaning. Thus Minsky noted, "Something has a 'meaning' only when it has a few; if we understood something just one way we would not understand it at all".¹ Chaitin, in his article *Randomness and Mathematical Proof*,² suggests the same idea in his definition of randomness. If data is ordered (= 'meaningful') it may be reduced in size by making associations with other already known data. Chaitin gives the following example: the sequence 010101010101010101 can be thought of as a ten-fold repetition of the binary figure 01, while it is much more difficult to reduce the sequence 011011001-10111100010 to such a compact concept. He calls the most compact known form of a piece of information its 'minimal algorithm', random by definition because of its perceived irreducibility. This is not to say that it is necessarily irreducible, just that the individual who formulated the minimal algorithm does not reduce it further. Hence it is impossible to prove in absolute terms that something is random, while relative randomness may even be quantified in some instances by comparing the number of bits in a piece of data and its respective minimal algorithm. Music analysis is the process of reducing music to a minimal algorithm: maybe to a grand perfect cadence, to a three-note figure, to an ideological framework, or to a network of social influences.

Meaning is a prerequisite for memory. Data is only remembered by incorporating it in a network of associations linking and defining the data with respect to other remembered data. We distinguish between listening and hearing: the former is an attempt to find meaning in sound by engaging one's memory, while the latter is a passive 'activity' with no quest for meaning. Although neither activity has a guaranteed result (a listener may be frustrated, a hearer surprised) they point to a distinction between two types of sound experience. One sound is easily associated with other data in the listener's mind, stimulating new associations; new thoughts, new ways of thinking. Another sound, in its ultimate form, is a sound that is heard but is not processed by the hearer and is in a sense unheard because it is instantly forgotten. Such a sound is perceived (although it is not actually perceived) as being irrelevant. It is a random sound - it

is its minimal algorithm. Most sound is experienced in the area between these two extremes.

It is this link between memory and meaning that has prompted societies to develop artificial forms of memory increasing the meaningfulness of their music. The collective oral-aural memory of a society, written and illustrated ideas, the technology and techniques of musical sound production, musical notation, and music recording are examples of media for artificial musical memory.

Recorded/Reproduced Music

Since the availability and propagation of recorded music, the terms 'live' and 'recorded' have been used to distinguish two types of musical process: production and reproduction. I will use the terms 'live' and 'produced' as near-synonyms referring to music originating in real time and space, and 'recorded' and 'reproduced' as two components in the process of generating music originating from other time and/or space. I will use the term 'recording' often as an abbreviation for mechanical and electronic recording, while 'notation' will refer to the written recording of music. Close links between recording and notation will sometimes make the choice of term fairly arbitrary.

Factors distinguishing produced and reproduced music include degrees of 'fidelity', temporal and spatial factors and monetary value.

A live performance, being itself, is a perfect representation of itself. A reproduction of a performance is judged in terms of 'fidelity' - the extent to which it is faithful in representing the 'original' performance. A 'lo-fi' reproduction draws attention to the inefficiencies in the recording/reproducing systems, while a 'hi-fi' reproduction will closely resemble the original sound. R. Altman and M.A. Doane have argued that sound technology is an "ideologically determined progression towards self-effacement".³ However it is interesting to note that while high fidelity has been the theoretical aim of the recording/reproduction industry since its inception, it was not until the mid thirties that the industry began to attempt to put it into practice.⁴ Previously, America's leading manufacturers of radio and phonograph sets assumed that consumers would prefer a soft, mellow and flabby sound to a potentially loud, brilliant and full-bodied 'hi-fi' sound. From the mid thirties onwards 'hi-fi' buffs began to take con-

trol of the industry, resulting in the caricature of 'hi-fi' buffs more interested in fidelity than in music. However rather than settling for all-but-perfect sound reproduction, the recording industry has gone a step further and introduced what I will call 'super-fidelity'. Recording/reproduction technology/techniques have been designed to produce a reproduction which is actually 'better' than the 'original'. Tape editing, multi-tracking, equalisation, compression/expansion, and reverberation are designed to help produce a perfect reproduction of an ideal performance.

A reproduction comes from somewhere or 'some-time' else. With very little effort one can listen to an almost limitless selection of reproductions unrivalled by the variety of live music available. Most forms of produced music require resources that very few individuals would be capable of mustering (money, 'talent', music hardware, rehearsal time). As a result, most of society only listens to the produced music that a small highly resourced group offers (producers and musicians). Live music is transient and unique whereas recordings usually seek eternal life, existing in multiple clones. The presence of real and accessible people making custom made sounds contrasts with an industry mass-producing music for mass-listening. The cloning ability of recordings is one of the reasons for the perceived necessity of super-fidelity: a single recording may be listened to many times and deviations from the ideal performance may either be appropriated into a listener's concept of the ideal performance, or become increasingly annoying ruptures from the listener's imagining ('sounding'?) of the ideal performance.

Produced music has attempted to overcome its restriction to localised areas by introducing amplification and broadcasting. The introduction of powerful public address systems has enabled rock concerts to flood very large venues (drowning out the audience), the sound often overflowing into the area around the venue. 'Live' broadcasting enables one aural event to potentially be heard all over the world (and beyond!?). But in these two cases, the live-ness of the event is compromised and a hybrid of production and reproduction occurs. One characteristic of most live music is the audience's access to the performers. In a small scale event, the audience (if there is one) can talk to the performers; in larger events mass-responses may only be possible; and in a live broadcast or a recording, audience/performer communication is essentially one way.

Reproduced music tends to be much less expensive than produced music. While it may be cheaper to stage a live performance than to record the performance and create a reproduction of super-fi standard, the economies of scale in the reproduction process are enormous due to the longevity of the medium and its ability to clone. An inversion of this tendency occurs with environmental music - live but not produced. In this case the performance is free, and a reproduction infinitely more expensive. The relatively high price that we are prepared to pay for produced music indicates that we often view reproduction as ersatz production.

Music Notation

The earliest known notations (ancient Greek) were

theoretical rather than practical.⁵ Theorists used notation to describe music in order to relate music to ideals, numerology, mathematics, geometry, and astronomy. In both Traditional Oriental and Ancient Greek music, notation has been used as mnemonics for apprentice musicians. When notation is used as an aid to performance in Oriental cultures the performer tends to place greater emphasis on his/her ability to improvise than on being able to give a literal reproduction of the notation. Hence one of the first concerts of Western music in Japan omitted the names of the composers on the program, instead listing the performers.⁶

Since the time (perhaps before the eleventh century AD) when the role of notation in Western music was similar to its role in the East, notation in the West has taken on new roles. These include:⁷

- (i) allowing a *composer* to invent new music and calculate its effects in advance;
- (ii) providing an exact timetable for the co-ordination of interdependent parts;
- (iii) acting as a substitute for performer memory;
- (iv) providing a literate basis for music appreciation;
- (v) allowing a composer to control (or attempt to control) every action of a performer;
- (vi) transcribing unnotated musics for musicological study;
- (vii) existing for non-aural purposes - such as in Cage's **Notations**.

Notation in the terms of Electronic Recording

James Tenney's **Three Indigenous Songs** - transcriptions of performances by solo voice - exploit congruent features of music notation and recording. The voice has been translated into purely instrumental form by assigning the fundamental and three major

The beginning of the second of the Three Indigenous Songs.

harmonics of each vowel to bassoon/tuba and flutes respectively, and the consonants to percussion.

Tenney comments on the resulting sound:

"The perceptual space induced by **Three Indigenous Songs** is meant to be somewhere near the threshold between music and speech. Occasionally, perhaps, some semblance of the underlying text may actually be heard."⁸

We can see similarities between the processes of transcribing/performing this piece and of recording/reproduction by comparing their basic elements (below):



There are two important differences between the two processes:

- (i) recording/reproduction is largely automatic, while the other is not;
- (ii) recording/reproduction is usually hi-fi, while Tenney's transcription has a lo-fi input transducer, resulting in an output signal bearing little resemblance to the input. A 'bad' performance of Tenney's piece would be caused by a lo-fi output transducer. Lo-fidelity is audible by the noise it adds to the signal; hi-fidelity is inaudible.

If the input signal and contents of the storage medium were not available to the listeners they would be unable to determine the fidelity of a performance. This occurs to some extent with composition and the production of recorded music without reference to an original aural event. We are reminded of Cage's oft-quoted comment about the independence of composition, performance, and listening.

This section of the essay will analyse music notation in the same terms as the earlier analysis of recording/reproduction. The first issue I should address is to what I am referring with the term 'unnotated music'. Notation, like memory, occurs in degrees: a memory may be detailed, or merely a vague outline. Notation may predetermine an aural event in great detail or just provide a loose framework for action. The ultimate form of unnotated sound has no perceived predetermined elements in any medium of memory, artificial or otherwise. We could even think of bus timetables as a notation for a rhythmic element of city sound, bus engine design as a notation for one element of timbre and frequency. We could think of seasonal and daily ecological cycles as notating the sounds of nature, and so on. However we must be careful to understand the difference between Chaitin's definition of randomness, based on an individual's understanding of data; and traditional definitions which are based on the processes used in the generation of data. Using a traditional definition an entirely unnotated sound would be 'randomly generated' data, an elusive concept if we apply the (also traditional) idea advocated by Laplace that all events can be predicted simply by performing enough cal-

culations on all presently available data. Using Chaitin's definition we can arrive at the concept of the degree to which notation (history) is *perceived by an individual*, regardless of whether this corresponds to the actual history (or notation) of data. An unnotated sound is an unexplained sound and an entirely unexplained sound is a random sound.

I will use the term 'unnotated' to refer to relatively unnotated music; music which is less notated than other music. An example of music with a relatively low degree of notation is unrecorded 'free' improvisation. One of the most loosely notated compositions

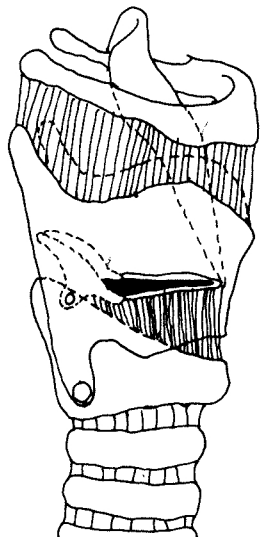
that I am aware of is La Monte Young's composition that simply reads, "Little whirlpools in the middle of the ocean," with no further performance instructions.⁹

A performance of unnotated music, being itself, is a perfect representation of itself. A rendition of a notated score is judged in terms of 'fidelity' (authenticity) - the extent to which it is faithful in decoding the data inscribed in the score. A 'lo-fi' rendition draws attention to the incompetency (or deliberate sabotage/adaptation) of the performers, while a 'hi-fi' rendition will closely resemble the ideal form of the work (= the composer's concept of the work?). Just as the history of recording/ reproduction technology has shown a trend towards 'self-effacement', 'classically' trained performers aim for accurate 'authentic' performance. If the Nineteenth Century (and the first part of this century) was a period where interpretation would override authenticity, during this century hi-fi performance has become highly fashionable. Urtext editions have replaced highly edited scores and performers of Classical and Baroque music go to a great deal of trouble to play 'authentic' ornamentation and phrasing - on original instruments. There is some irony in having what once was a living tradition of improvisation transformed into a process of duplication where every gesture has to be musicologically 'correct'. Just as a 'hi-fi' buff may be caricatured, performers seeking 'authentic' performances can be caricatured as being more interested in 'authenticity' than in music. We can also find the concept of 'super-fidelity' in notation. A composer's ability to spend days writing a couple of minutes of music enables him/her to write into the music structures beyond the capabilities of improvisers.

Notated music comes from somewhere and 'sometime' else. Music notation is different to electronic recording/reproduction in that it requires a great degree of skill to realise traditionally notated music, different skills for different types of music. Thus an effortless journey through musical time and space may be possible with a hi-fi system, but is impossible for even a highly trained musician relying on his/her skills in interpreting notation. Notated music often seeks eternal life, existing in multiple clones. As we

are referring more often than not (particularly with 'high' forms) to notation coming straight from the pen of a composer, there is a tendency to think of the composer as having been immortalised. Thus we speak of 'Bach' when we really are referring to his music. Many listeners of 'classical' music seem to think of a hi-fi realisation of a 'great' 'classical' score as providing a clear window through which they can gaze with awe at the authentic authority of the author: petrified / patrified in notation. What a score does not predetermine is determined in the performance (by conventions, idiosyncrasies and context). Thus while a highly notated performance will refer very strongly to the source of the notation (the composer), a loosely notated performance will refer more to the source of the other elements. One way that a composer can use to avoid relying on performers in a loosely notated performance (thus retaining more responsibility for the performance) is to use automatic but unpredictable performance processes such as in certain types of live computer music.

The intermediate areas in the live / reproduced spectrum are analogous to loose notations - those that use unpredictable elements. However where we



The 'voice box': part of our natural musical Read Only Memory

discussed broadcasting and amplification (media that transmit through space but not through time) we cannot find a direct equivalent in notation because of the time involved in preparing, distributing and decoding the notation. When we attempt to draw parallels between the relative accessibility of recorded music and notated music and their respective counterparts, we must remember (thinking of them as artificial memory) that the recorded performance (the event being memorised) parallels the composition of a score, and the act of listening to a reproduction (the process of recall) parallels the act of deciphering notation-performance. With this in mind, there is a correspondence with the high degree of accessibility the performer has to the 'composer' in an improvisational situation (where the performer is the composer) and the low degree of accessibility a performer has to a dead composer of notated music.

Unnotated music and notated music tend to cost the same amount for audiences. However if we compare the concept of 'monetary value' to that of the 'amount of creative effort involved per performance' there might be a correspondence with live and recorded music respectively. Unnotated music can require a great deal of creative effort to produce - every sound in a 'free' improvisation has to be invented by the performer. In contrast, the score of a notated piece provides a vast amount of data which needs only to be interpreted (although this is usually not a small task). Many performances can take advantage of this pre-fabricated music, potentially generating the vast economies of scale (in terms of creativity) similar to those of recorded music (in terms of \$\$\$ and creativity). The same inversion of this tendency occurs with (unnotated) environmental music. However because of our society's reverence for the genius behind the score, it would not be true to say that unnotated music tends to be more highly regarded than notated music and it is quite possibly the other way around. This is also because of the prevailing view that 'interpretation' is a creative activity, while electronic reproduction is merely automatic.



The copyist stamp: a licence to deal in notation

Notation and Recording as Thought

Memory is an inherently conservative process, thought is inherently radical. So far we have mainly been considering recording and notation to be media of artificial memory; means of preserving musical data, of establishing and maintaining official art. This was the original aim of both media. However, as Cardew has pointed out:

"Assuming that notation was designed to *preserve* musical forms by putting them on accurate written record, the actual effect of its introduction was to pave the way for a great *diversification* of musical forms." (Cardew's italics)¹⁰

Developments in notation have allowed composers to think of music in increasingly abstract terms, enabling them to develop new compositional techniques through notation. Guido d'Arezzo, the Eleventh Century inventor of staff notation, took ad-

vantage of his invention by using it for a substitution cipher, enabling him to set texts on a more algorithmic basis.¹¹

Cardew considered notation to be the primary instrument in the rise of the composer:

"The history of staff notation is a history of increasing differentiation, increasing precision. ... The more differentiated and precise the notation became, the stronger the hegemony of the composer over the art of music. Elements of improvisation and ornamentation, ie. independent contributions from the interpreter, were gradually eliminated."¹²

While notational developments have paved the way for "a great diversification of musical forms", they have also pointed musical developments in particular directions. Hugo Cole wrote:

"the structure of our own conventional notation system has (...) influenced the course of musical evolution - by encouraging us to think of music exclusively in pitch and time relationships and by discouraging us from notating microtones or irregular rhythms."¹³

On the same point, Kagel has commented:

"... the development of a particular notation implies a latent development in the musical language."¹⁴

Notation has so influenced our music that it has affected our musical vocabulary. We ask a trumpet player to "play a note" despite the absence of notation. We say "the music" when we really mean the notation. Super-fidelity in compositions is a result of using notation as artificial thought. Developments in techniques of super-fidelity have corresponded to developments in notation: for example Grout considers polyphony to be a result of staff notation.¹⁵ By the same token, the establishment of a musical infrastructure (including notation) based entirely on the 12-note equal-temperament scale formed the basis of atonal composition: atonality was an extrapolation of musical theory within an established notational system. The twelve-tone technique and subsequent serialist techniques were an extrapolation of the concept of super-fidelity in composition: extensive pre-compositional notation allowed structures unprecedented in self-conscious complexity. These pieces used pre-compositional notation as their philosophical basis, their justification. On this subject Feldman wrote:

"The idea of construction as a *subject* in music was largely brought about by the breakthrough in musical innovation in the past fifty years ... The new possibilities of *sound* suggested by the innovation were not regarded as having any compositional significance. What was emphasised was the unifying of all these new elements into significant *form*. An emphasis on this more evasive element - sound - would have upset the precarious balance of the 'ideal composition'." (Feldman's italics).¹⁶

Feldman comments on his reaction against this notion:

"Up to now [1951] various elements of music ... were only recognisable in terms of their formal relationship to each other. As controls are given up, one finds that these elements lose their initial, inherent identity. But it is just because of this identity that these elements can be unified within the composition. Without this identity there can be no unification. It fol-

lows then, that an indeterminate music can lead only to catastrophe. This catastrophe we allowed to take place. Behind it was sound - which unified everything. Only by 'unfixing' the elements traditionally used to construct a piece of music could sounds exist in themselves - not as symbols, or memories which were memories of other music to begin with."¹⁷

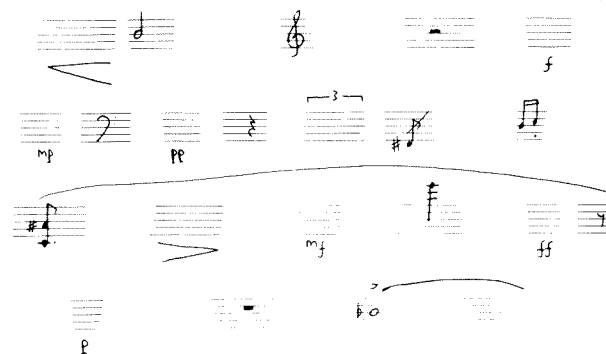
Just as indeterminate notation has been a reaction against highly notated music, indeterminate compositional techniques have been used as a reaction against highly notated compositional techniques. An interesting example of an indeterminate compositional technique which is, however, entirely determined by the traditional system of music notation is a piece that I have been assisting with called **The Pen is Mightier than the Sound:**

AN OPPORTUNITY FOR PEOPLE WHO ARE NEXT TO NOTHING ABOUT

MUSIC NOTATION

Since the time of Pope Gregory I (590-604), music has become increasingly controlled by notation - a system of CYPHERS designed by a CONSPIRACY of 'musicians' with the intention of EXCLUDING untrained people from the MEANS OF PRODUCTION of music. There have been two basic motivations behind this CONSPIRACY: the establishment of a MONOPOLY over the supply of music for the sake of POWER and PRESTIGE; and FINANCIAL GAIN through the consequent necessity for vast networks of music 'education' to impress on the masses the importance of the SECRET SYSTEM of notation, and to educate a handful of CHOSEN ONES, enabling them to pass on the CONSPIRACY to the next generation. In this way, OTHERWISE ECONOMICALLY IMPOTENT ELEMENTS of our society have been able to set themselves up in positions of POWER and PROFIT through the perceived need for composers, music teachers, music publishers, music copyists, highly trained performers, etc.. YOU, who know next to nothing about music notation, are being kept in AESTHETIC SLAVERY by these 'musicians' who, in the last 100 years, have introduced NEW WEAPONS OF DOMINATION AND OPPRESSION - the magnetic tape, the unulating groove, and the digital encryption! THESE FASCISTS WILL STOP AT NOTHING TO TOTALLY CONTROL YOUR SOUND WORLD!

NOW is the time for YOU to RESIST AND STRIKE BACK. In SOLIDARITY with your fellow AESTHETIC SLAVES, YOU CAN BREAK FREE AND SMASH THE CONSPIRACY! Just fill the following page with musical symbols (see examples of these below) and YOUR composition will be combined with those of YOUR CO-GRADERS into a piece of MUSICAL SABOTAGE.



the pen is mightier than the sound
the pen might tear the sound

The mock-revolutionary manifesto is distributed to non-musicians together with a blank page of manuscript in an effort to get them to fill out the manuscript with arbitrarily chosen musical symbols and return them to the co-ordinator of the project. The co-ordinator then compiles the arbitrary notations received and organises musicians to attempt to play the resulting parts. The musicians are faced with un-'idiomatic' parts riddled with unplayable and contradictory notations. As the aural effect was not even considered in the 'composition' process it is, in a sense, the slave of the notation. However the incompetency of the slave is exposed by its inability to carry out its master's instructions, and aurality is found guilty and sen-

tenced to death. We are moving towards the concept of notation for its own sake: where aurality is irrelevant.

Super-fi recording, like super-fi notation, uses its medium as thought. Multi-track recording techniques enable the producer to think about each individual track as an arranger might think about each instrument on the score. The end recording is not so much a memory of an aural event as a thought about an ideal aural event, remembered by the recording medium. Complex manipulation of recordings has recently become much easier with the advent of digital sampling and quite often the producer's role may be analogous more to a composer than to an arranger. This idea is not new - in the late Nineteenth Century there were suggestions of using phonographs as 'composing machines' by playing records backwards and at different speeds.¹⁸ An article by Caroline Wilkins describes some of these possibilities.¹⁹

Just as recording can be used as a thought process (rather than as memory), so can reproduction. An excellent example of this is Ernie Althoff's *The Way I See It* (NMA Publications 1985) - a piece for live cassette - where the cassette owner may improvise with the reproduction system, systematically record over the pre-recorded material, choose not to listen to part of the cassette, use the cassette for 'non-musical' purposes and so on. The decoding of notation can be used in a similarly creative way. Some of my notated compositions have used illegible, inconsistent, and impossible notations, forcing the performer to find creative ways to interpret the score.

Final Comments

I wrote this essay not as a philosopher or musicologist, but as a composer and music copyist. It is my view that composers should be aware of the implications of the cybernetic systems that they devise to realise their music, making sure that these implications are compatible with their philosophical aims. To me, deterministic notation and recording (ie. using the media extensively and exclusively as artifactual memory) are associated with what I consider to be out-moded ways of thinking: imperialism / fascism, cultural domination, deterministic views of science, a blind faith in logic, and thinking in terms of absolutes. More directly they are associated with a view of the 'creator' (composer) as an almost god-like figure with complete control over his/her creation (composition), asking only for worship in return. I prefer to think in terms of political equality, multi-culturalism, chaos, Gödel's Proof, and relativity.

Of course musical power is not real in the sense that military or political power is: with music we are dominated only by consent. It is also important to remember that music can only be notated or recorded within very limited parameters. While you may consider the playing of a record to be pure reproduction, the event is 'live' if you consider the inefficiencies in your reproduction system, other sounds penetrating your aural environment, your reasons for playing the record and literally everything else in the universe. To think of that activity as a reproduction requires the imposition of an extremely selective mental filter. Even if you could think of nothing but the reproduced sound, the reproduction is still fundamentally 'live'.

As Chaitin implies, all meaning (including all music) is founded on arbitrary or random premises. Ultimately even the most highly notated event can be viewed in terms of a minimal algorithm which is random, and therefore live or unnotated.

Footnotes

1. In R. Duisberg, *On the Role of Affect in Artificial Intelligence and Music Perspectives of New Music* Fall Winter 1984 p11.
2. *Scientific American* May 1975 pp47 - 52.
3. J. Belton, *Technology and Aesthetics of Film Sound in Film Sound*, E. Weiss and J. Belton (eds) Columbia University 1985 p63.
4. R. Gellatt, *The Fabulous Phonograph* Cassell 1956 p229.
5. H. Cole, *Sound and Signs, Aspects of Music Notation* Oxford University 1974 p6 ff.
6. W Kaufmann, *Music Notations of the Orient* Indiana University 1967 p4.
7. Cole op. cit. p9 ff.
8. *Soundings 13 - The Music of James Tenney* Soundings 1984 pp84 - 113. See also S.E. Blache, *The Acquisition of Distinctive Features* University Park Press 1978 p50ff.
9. see D. Higgins, *Intending in FOEW&OMBWHNW* Something Else Press 1969 p57.
10. C. Cardew, *Wiggly Lines and Wobbly Music* in *Studio International* Nov/Dec 1976 pp249 - 255.
11. see H Kirchmeyer, *On the Historical Constitution of a Rationalistic Music Die Reihe No. 8* Theodore Presser & Co. 1968 pp11 - 24.
12. Cardew op. cit.
13. Cole op. cit. p13.
14. M. Kagel, *Translation - Rotation Die Reihe No. 7* TPC 1965 p32ff.
15. D. Grout, *A History of Western Music* Dent 1980 pp79, 80.
16. M. Feldman, *Predeterminate/Indeterminate* in *Essays* Beginner Press 1985 pp47 - 49.
17. *ibid.*
18. Gellatt op. cit. p29ff.
19. C. Wilkins, *An approach to 19th century sound*, in *NMA5* 1987 p7.

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Transmitter bodies: aurality, corporeality, cuts and signals

Fran Dyson

Aurality and metaphor:

The terrain of aural offers no easy access. It is a terrain which features both the phenomenal realm of sound and its theoretical determinations; what is heard and what can be said of what is heard. Between the two, between the phenomenal and the spoken, lies an expanse yielding all the presence of a sonic event, all the vacuity of the discursive abyme, and all the incinerations of searing thought. The term 'aurality' is uncannily appropriate in this regard; 'aural' means both: pertaining to the ear (L. *auris*) and pertaining to the air or an 'aura': that is, a subtle emanation or vapour emanating from living bodies. Already then the aural presents as a phenomenon defined by the fact of its audition and the peculiarity of its very subtle emission. Airborne sound, circulating through the body via the ear becomes also an aura - an emanation produced by the listening body. The term aural, without even asking, seems then to escape what little materiality the experience of listening, or the thought of sound, might have.

This departure leaves it precisely without body, without substance, such that the frequently cited notion of an 'aural object' must forever be abandoned to the idea of the sonic event, and in that abandon create a primary space for the workings of metaphor. At first this seemed to be the natural outcome of a language and epistemology literally unable to come to terms with the phenomenon of aural, falling short at every turn of phrase that failed to reveal a visible, tangible object. Theorising sound or audio the becomes an enterprise concerned as much with uncovering a body of appropriate metaphors as analysing a material sonic event. The labour of such theory being to excavate a descriptive lexicon which could be applied to the aural without precipitating a collapse into the epistemological hole such terms were invariably buried within. However, the holes were everywhere: no sooner would a tentative analogy be mooted between say, sound theory and film theory, than metaphors would emerge (aural objects, acoustic mirrors¹) which left sound somewhere in the middle of a theoretical silence. Then of course, there were *all* the metaphors of the body, becoming more vociferous as the being and meaning of aural brought it closer to alterity. Noise too, could input here - with the various exchanges of information theory preparing the ground for a metaphorical noise occupying a similar position to its sonic counterpart.

Such discursive correspondences are complex, however they have suggested a possible conclusion: that, in its atmosphericity, in its perpetual circulation between the body and its exterior space on the one hand, and between the concept of the body and its discursive space on the other, aural exists as a terrain hospitable to only certain kinds of configurations, those which allow a degree of paradox, and those which are not ashamed to ask "what is a body, what is an event, an emanation?". It is within these airy folds that the subject of this paper, transmitter bodies, is located, although being audio or rather radio-phonetic, this subject circulates via another kind of air or ether, commonly called the airwaves.

As mentioned, articulating a relationship between the body and aural is particularly difficult. For we are concerned here with a number of bodies; fleshy bodies, bodies of sound, electronically reproduced bodies and bodies of thought. And the difficulty is complicated by the status of the body in contemporary theory. Aligned in various ways with alterity, the otherness of the body can easily be formulated in terms of the otherness of aural; both resist the categorical imperatives of Western epistemology, both refuse the boundaries and divisions, the subject-object dichotomies, the ontological identities *that* epistemology seeks to impose. Sound, like the desiring body, cannot be thought of as discrete - it flows, it forms a continuum, it has no edges. So it comes as no surprise that, consciously or not, notions of difference are often articulated using the aural metaphor: music, noise, dissonance, vibration etc. acting as a kind of cahotage or eruptive, interruptive mess, to the plodding edifice of the Same. Or a sovereign silence becoming the only possible vocalisation or sounding of the unspeakable. The aural metaphor, being preeminently a-specular, resists philosophical interrogation, providing a kind of anti-matter or anti-matter for the architectonics of deconstruction. Noise, cacophony, rumour; (L. noise), sonic or phonic envelopment, the fluidity of sound and music, the interiority of aural experience, the vulnerability of the ear, the grain of the voice, all become rhetorical devices for rendering the cracks in Western metaphysics more apparent.

There is no problem with this, yet an odd circularity develops when aural is the object of inquiry and these same metaphors describe their literal counterparts. When aural and alterity are conflated, with the former acting in a sense as a silent but nonethe-

less potent term for the articulation of the latter, the aural becomes a metaphor for itself. It is used, not to describe sound, but rather to gesture towards a theory and praxis which just so happens to correspond to the phenomenal specificities of sound; the 'facts' of listening, which include for instance; the immersion of the subject in the aural continuum - an immersion which hypothetically would effect a radically different subjectivity and knowing of the world than that which vision, always under the control and in front of the subject, produces. Unfortunately such metaphoricity leaves the analysis perilously close to tautology, absurdity or poeticism, and for that reason theoretically (in what could be called an orthodox sense) untenable. Certainly, the talk and the thought is garbled. Music, for instance, may serve as a model for theory which incorporates notions of metamorphosis, fluctuation, improvisation, assemblage and polyphony in its inclination towards states rather than qualities, or states *as* qualities. However, 'music' is not in itself stricture or structure free, as a comparison between classical tonality and say, Cagean or post-Cagean indeterminacy, would suggest.²

Silence may function very well as a sign of the body's unspeakability, however in the absence of a Cagean rhetoric very little, discursively, can be said about its literal, phenomenal a-presence.³ Similarly noise, a favoured term in information theory, might very well increase the complexity of communicative systems (by providing an impedance to information flow which forces the communicators to be inventive) however it's almost impossible to theorise the productive potential of jack hammers at 6.30 in the morning. And how does one respond to the argument that not all noise is noise, nor can noise be said to interfere when all sound perhaps is music? The sorts of absurdities which these sticky confluences and errant metaphors generate are the basis for what can only be very untenable theory; theory which can't quite be grasped, which is again, airborne.

Bearing this in mind, I would like to turn now to the evolution of the transmitter body. Similar in style to the body without organs, the transmitter body is a conduit driven by many different phenomenal, elemental, electronic and semiotic intensities. Animated by corporeal and ethereal vibrations, emitting signs within a chiasmatic, particled continuum, the transmitter body stratifies and de-stratifies according to a logic fused from systems of meaning and signification on the one hand, and the signal logic of the airwaves on the other. But this complex didn't all happen immediately.

Montage:

At first, the voice is recorded, and with shattering consequences. For the recording and reproduction of vocal utterance inaugurates the reign of the disembodied voice; the voice which, freed from the surly bonds of flesh and reorganised as signal on magnetic tape, becomes irrevocably dislocated from any sense of the here and now. One of the features of the voice on tape is its openness to disfigurement and dissimulation - it offers itself as a unique potential for various kinds of cosmetic surgery effected through that commonest of surgical instruments, the razor blade. The tape voice, ripped already from the throat

of the subject presumed to be innocently immersed in lived experience, can now be tortured - forced to yield its breathy secrets, to adopt a condensed, new-speak tongue, to exchange its histories and memories, once spoken perhaps only to an other, for the rhetorical slices of 'life' rationed to multiple unknown ears. While the process of recording mutters an original, phenomenal defilement, (having transformed the acoustic event or the immediately present speaking voice into a reproduction, with all that implies), it is the process and technique of editing which emerges to claim the most devastated, and post modern interiors of this new radiophonic body. Sporting the razor blade as emblem of twentieth century severance, the reproduced and edited voice can be recognised by its cry - audible as the cry of the cut, emitted from a fragmented body, spoken through a discourse of loss, and surrounded by the incessant repetition of the prefix 'dis': for where there is dislocation, disintegration, disembodiment and dismemberment, there too will be the severed and spliced voice, with all its audiophonic and discursive associations.

The cut, cutting, montage, is indeed quite a fickle phenomenon, its straightforwardness and technological simplicity hiding the transformation which takes place as one piece of audio tape is manually grafted onto the next, to construct an intertext, but also to provide a larynx for this technological rather than homely craft. There seems to be a correlation between the number of cuts any singular text or textual body (that is, voice) can sustain, and the level of its social power; Reagan supports a multitude of incisions not only because his voice carries - and indeed has carried the weight of national disasters, global conflicts and, in this context, various ventriloquies perpetrated by audio artists, but because Reagan's text, broadly identified as the rhetoric of Americana, is also both immovable and unstoppable. Reagan's voice and Reagan's text endure the harshest, the most obsessive, the most minute of cuts, keeping the cut, and all that it stands for, alive. But when at last the voice and rhetoric of Reagan (or Michael Jackson, or Hawke) is severed from all credibility; when it is, for instance, sampled to oblivion, something else takes its place - not just the manic stuttering of a strangled voice, but a reexamination of the boundaries of the cut itself. One listens to montage textually, but one also hears the rapid bleat of the edit, composed, not from single or multiple voices spliced together, but from the material of their very possibility - moments of interference and interruption - tape hiss, signal static. In doing so, one recognises the profundity of that slight incision into the flesh of an audio text, because multiplied, that incision can be thunderous. At first it appears only to affect the body, its voice and its language, or the integrity of the audiophonic space, but when the cut is applied across all surfaces, when the incisions reach a critical mass, when there is nothing left of the body but gaps and crevices, then a certain transformation has occurred and the body begins to leak. This is very important for the practise and metaphor of the cut, since a razor blade, like a shard of mirror, is a fairly useless instrument for piercing, wounding, severing, dislocating or grafting a flesh which has surrendered its thicker skin for the spill of becoming.

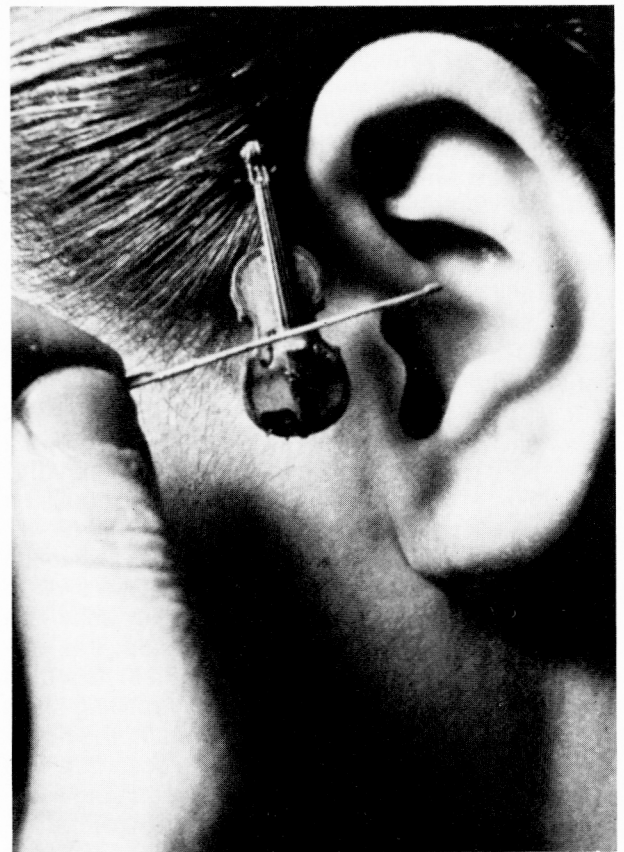
The Radio Within:

With the gross lack of anything solid to cut into, the potency of the cut, as paradigm for the social and technologically reproduced subject, suffers accordingly. Open to everything, the body now becomes a surface not to be inscribed so much as infected, its corpse regarded less as dead than decomposing. And this shift calls forth a hermeneutic founded upon different metaphorical procedures; the body is not severed but rather disintegrates, its wounds become ghettos for multiple proliferations and implosions, its punctured borders and leakages not only disclose a fragmented self pierced by the foreignness of so many mechanical, organic and social splicer-tongues but, in keeping with the spirit of the age, open up passageways of a different corruption. Through the dirt, let us say the noise of this corruption, the decomposing body reappears as a body in composition, a meta body, signalling the presence of a now nomadic, *transmitted* subjectivity.

One advantage in thinking of the audiophonic body as transmitted rather than split is that it releases audio from the glare of visualist epistemologies and their specular, dichotomous consignments; projection, reflection, mirroring, the abyme, the screen and the eye/I, situating it instead within the field and dynamic of broadcast. While montage is effected upon a surface, the gaze rests upon an appearance, analysis proceeds via reflection upon the mental image, and the subject is constituted via the mirror/screen - all of which involve a linear movement from inner to outer, outer to inner - transmission identifies the cut within a system of already abstracted leakages which circulate, (rather than progress) before, during and after any authorial incision.

And these already determined leakages present a different kind of body, one well on the way to becoming a transmitter, closed, or rather indifferent to the affect of the razor blade. While montage projects the edge of the cut into a dislocated world of other edges sharing the common characteristic of being able to be joined, thus presenting a social, perhaps post modern condition which can still be reviewed, re-edited, reassembled and rearranged, transmission evokes a world not of edges but of particles teeming but not joining or melding into any unified object. While montage presents a body which, while fragmented, still remains whole, enveloped by a skin, a text, a meaning, a space, able to be cut, and even if perforated, able to be infected, transmission investigates the interior of the cut itself. With an ear tuned towards the hiss of the glitch, it uncovers a less human, more electronic kind of body, one which does not bleed when cut but rather effervesces, proving once and for all that the body, including the audiophonic and textual body, is not so much infected from without, scarred and schizoid by an alien technology, as *irradiated* from within: "L.radius: a ray, emanating from a centre; L.radians: beaming, filled with light, radiation; L.irradiatus: to illuminate, to brighten, to heat with radiant energy, to enlighten intellectually".⁴ Which is to say, its emanations are inscribed with the theology of light, coming from the cosmos, the Sun or Son, but descending to the material or pseudo materiality of electricity. The radio

set, like the television, is also illuminated from within, yet it beams the voices and signs of the other. In this sense it is not merely a receptacle, as the Madonna was impregnated by the 'word'/'seed' of God entering her ear via a ray of light (the Spirit), as matter is believed to be the inert receptor of the divine and intellectual ether. The radio set, like the listening body with its auratic emanations, is not merely an object, in the same way that the transmitting body is not merely a body. Because when thought of as a transmitter of signals rather than an object to be dismembered and divided, the body is released from interior/exterior, subject/object dichotomies. Having no skin, no mirror, no screen as formative agency, adopting the metaphor of circulation rather than projection, the transmitting body radiates rather than reflects, with all the abandon and horror such radio activity implies. Because such a body emits, receives and abstracts via noise/interference (in its material and metaphorical sense) and because noise itself



hedges any conceptually substantial border, it must be relocated within the social and radiophonic ambit, not as some originary source, but as a ubiquitous, bodiless signal: acentric rather than decentered - open to manipulation therefore by the most destructive and liberatory forces.

With no inner or outer to this ambit, other than the contours of the radio set or the social and technological parameters of broadcast institutions, the concept of 'the body', and particularly the once innocent, humanist body, breaks down and breaks away. And because the radio discharges voices and sounds from an untraceable elsewhere transmuting their ma-

teriality on the way, the references and genealogies of audio texts and spaces, once so important to the force of the cut, become irrelevant. The body and the text become taut with the knowledge and fragility of incision; constituted by the cut and its meaningful histories yet escaping the dead ends of dead voices - voices who's grain is irredeemably cut and dried by the overdeterminations of reproduction and mass media effects - it engages the detours of transmission: unsolicited interference, chance meetings on two way radios', barely decipherable recordings of bodies once thought buried. In this way the transmitter body repeats the history of audiophony, making audible those mystical traces surrounding the latter's inauguration from the distanced perspective of late twentieth century ears. Like Thomas A. Watson's interest in electricity and the occult amidst the early barkings of telephony, like Edison's attempts at thought transference and communication with the dead, like the 'eccentric' obsessions of early ham operators conversing on the airwaves with their 'magical' crystal sets, the transmitter body reconstructs an openness to the unexplainable, to the outside and in particular to the ether of which it feels itself a part.⁵

In this way it short circuits the repressive 'rationality' of later twentieth century scientific and technological discourse which steadfastly removed any trace of the mystical in the developments of mass media. It also returns the intersubjective current which characterised early two-way radio in Australia which, modelled as it was on the telegraphic system of transmitting messages between individuals, was of course replaced by the more easily institutionalised, controllable and consumeristic one way radio receiver.⁶ But the transmitter body also repeats the rhetorics of the future. In its vacillations between transmitter and receiver, body and instrument, matter and machine, origin and outcome, it compliments technophilic projections of what the body and reality might one day become. And this sort of musing is particularly evident in current audio technology, since audio is particularly suited to technological manipulation. The recent enterprise known as 'Virtual Reality', research into which has been funded largely by NASA, is working on a simulated aurality which, for the electronic musician "makes the jump from our [computer] desktops to inside our heads, while our bodies begin to enter our machines." The electronic musician, researchers believe, is a perfect candidate for such mutations because of his/her already intimate connection with the instrument.⁷ The 'instrument' can be a keyboard, a mixing desk, a radio transmitter. Once again, other realities, other worlds and most importantly, other theories are gesturing towards the aural, not because of (although partly explained by) an interest in the neglected realm of sonority and its theoretical/sensorial possibilities, but because the aural is uniquely free from matter and its ontological commitments, which makes it free for the opposing tendencies of critical theory and technological development. As Gerburg Treusch-Dieter rather bleakly indicates, radiant light, and all for which it stands (enlightenment, transformation, electricity, ethereality) once the province of the Gods, is now in the hands of humans: "Matter and the world has been taken over by technology....[and] mastered matter

can no longer be distinguished from those who have mastered it."⁸

Body Samples:

Having entered the aporia of transmission, it is very difficult to lament the loss of a body now so ethereally and electronically construed. And if the body is known by the noise of transmission, perhaps the schizophonic chatter of the present age, assailing the subject from all directions, is a result not of the body making noise via external means, but of the body, or the global mass of bodies, being noise in itself. As such, its voice would not be disembodied as it travels the airwaves, but simply altered during transit - a difference in degree rather than in kind. Of course, one does not so easily escape the concept of the body, even if, for the sake of transmission, it has shed its thickened skin, exhumed its membranous surfaces and ceased de- or recomposing its corporeality. The body-becoming-signal of technophonics finds itself skewed between body, on the one hand, and technology on the other, and this is a particularly difficult state for aurality to maintain, given its privileged position in the domain of the other. But one must consider the signal in its dual sense; as electronic *and* symbolic, as representing the flow of technology (the signal circuit) as well as the circulation of the sign (the matrix of reference). The body is therefore caught in web of technologies which transform it, or rather, its media representation, both materially and semiotically. And this dual transformation is once again the product of an evolution.

For instance, hearing the breathy, electronic voice of the sampler as it stylishly mingles with the best of worldly sound, and registering its presence within a technological rather than purely sonic milieu, is an acquired facility. The listener must have already been primed, through exposure to screen or radio, with idealisations of commonplace auditory events; acoustically engineered to engage the desires of both lonely and voyeuristic ears. The close mic'd voice provides a very good example. Occupying centre stage in the stereophonic theatre, it can perform as a voice so intimate it seems almost to whisper within the auricular folds, or as a voice, distant, authorial and ethereal, emerging from the cavernous spaces of the mind. In either case, it invokes a mode of listening easily attuned to the interior, yet this interior is an impossible, and impossibly ideal space. No human ear could greet the voluptuous presence of the intimate voice and remain organic, and regardless of our theological desires, the voice in the cavernous head will always remain a non-acoustic imagining. With additional technology, sounds of the body or acoustic space can be processed through instruments such as the Fairlight, to deliver new ideas, new essences of what the sonic and vocal body, in its hypostatic form, might be. This is a body born of the sound studio, attached to a taxonomy of sound effects, laden with a seductive sonority, and responsible for the production of that very pleasurable sense of heightened hearing (not only inside the body, but through walls of space and time, overhead, omnipotent) which can be experienced in any cinema or lounge room. It is a body which, in certain circumstances, evolves from a state of pleasurable ideality to

one of ontological impossibility - witness the startling array of synthetic sounds designed to bring into existence the abject, arcane and imaginary bodies and spaces of horror and Sci Fi. In the heart of their unimaginable, unthinkable being these bodies are known, or spoken through the special effect; harmonised, reverberated, chorused, equalised, overdubbed, and multiplied - anaesthetised and aestheticised in the same techno-symbolic treatment.

The transmitter body appears in the last stages of its evolution as a meta-body which not only emits but composes noise - the noise, the static of that once mute technology, which is the sound or rather the resonance of its own being. But this is not the primal noise of the oceans nor even the noise of machines, rather it is an evolved, organised and of course contradictory noise, light years from any phenomenal event, sedimenting, becoming almost material, from accumulations of the significations attached to every audiophonic, transmitted event, and from the electrical hum intoning each radiophonic movement or generation. Without any possible interference, this body of noise takes flight in the airwaves and brainwaves alike, leaving a series of impossible questions in its wake. Not only questions like "how do we think the body in its vaporous, electronic manifestations?", "how do we think the disembodied voice", and "is it possible to think the aural beyond 'the body', beyond the notion of substance and reference?". If the aural body is to be thought in terms of its circulation, abstraction, and transmission, if it exists only in and through that subtle, immaterial and noisy emanation, then it must, we must, abandon that last link uniting matter and metaphor.

This article is a reworking of Transmitter Bodies of Western Aurality given at the Sound Ideas symposium with sound artists/theorists Gregory Whitehead and Douglas Kahn, at The Lab, San Francisco, January 1990. Many thanks to Douglas Kahn for his assistance with this paper and to The Lab. for sponsoring the symposium.

Footnotes

1. Cf. Christian Metz, "Aural Objects" *YFS*, No. 60, '75 and Kaja Silverman, *The Acoustic Mirror: The female voice in Psychoanalysis and Cinema*, Indiana, '88. Interestingly enough, Metz uncovers the 'objectcentredness' of Western epistemology only to posit a new object, the 'aural object', within its scopic regime. Likewise Silverman, while noting the paucity of theoretical attention given to the soundtrack, and in particular the role of the female voice, in film theory, nonetheless attaches the specular metaphor par excellence; the 'mirror', to the title of this analysis.
2. Think here of the explicitly musical references in the formulation of Deleuze and Guattari's *Plateaus*.
3. Even when such rhetoric is invoked, the outcome is often in the form of the haiku - a form which is not known for its discursive clarity. For instance, in an interview with Daniel Charles, Cage responds to the 'question of being' posed by Heidegger with the following, somewhat muddled comment: "A sound possesses nothing, no more than I possess it. A sound doesn't have its being, it can't be sure of existing in the following second. What's strange is that it came to be there, this very second. And that it goes away. The riddle is the process." in, John Cage: *For the Birds*, Marion Boyars, London, 1981, p.150

4. Websters New Universal Dictionary

5. For an account of Watson's mystical inclinations see Avital Ronell: *The Telephone Book*, University of Nebraska Press, Lincoln, 1989. For Edison's formulations of telepathy and other worldly communication see Thomas A. Edison, *The Diary and Sundry Observations of Thomas A. Edison*, Dagobert D. Runes (ed), New York:Philosophical Library, 1948. Note that Edison was not alone, Marconi, Tesla and a host of theosophists were also interested in communicating with the dead via 'the wireless telephone' as this channel to the dead, it its ethereal, ectoplasmic and electromagnetic manifestations, was often called.

6. For an account of early 'ham' radio operations in Australia see *Bright Sparks: a history of radio in Australia*, broadcast as a series on ABC radio, 1988, and for the shift from two-way to one-way transmission see John Potts, *Radio in Australia*, NSW University Press, Sydney, 1989. This return is not however, figured in terms of a resurgence of the 'tribal' orality which Walter Ong and Marshall McLuhan suggest as the liberating product of the new media. It does not represent a 'secondary orality', fully inscribed with an alienated print culture united once again through the power of the spoken word. Circulation is here more important than either sonority or orality.

7. David Trubitt, "New Worlds: Virtual Reality and the Electronic Musician", in *Electronic Musician*, USA, July 1990. According to researcher Jaron Lanier, cited in this article, "Here you have this tight-coupled interaction between a person and a device that they're using...with their whole body. I think its a model of what interaction with computers will be in the future. This will lead to a very interesting era in which we won't be viewing music as one application for technology, but rather we'll be using music as an area that has a great deal to contribute to technology". p.39

In *The SF Weekly*, Lanier's passion for Virtual Reality is described by writer Gary Wolf as being directed towards "...that possible future when we will work not *on* computers, but *in* them." Inside the computer, real, mutual communication can take place, as opposed to the one way communication (read transmission) dominating current media technologies. Thus the argument for interactivity assumes a deeper significance; one 'interacts' with the machine, not by access to an increased set of options, but by 'becoming' machine, in a (virtually) ontological sense. Indeed, it is interesting the number of times the rhetoric slips between the simulated and the real: "In the virtual world, physical laws can be altered at whim. Pigs can fly. Flowers can talk. The user can grow or shrink, change sexes or change species..." For Wolf, 'the user' is as much the vision as the flesh...

8. Gerburg Treusch-Dieter: "The Beginning of the End: On the History of Radiation from Plato to Chernobyl", *Semiotext(e)*, NY, 1989.

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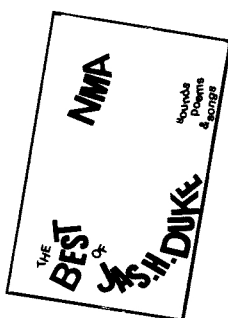
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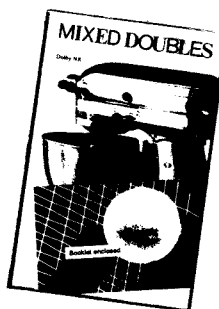
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Music, desire and the social

Ian Andrews

What is the position that music occupies in relation to language and social processes? Has music a subversive role in confrontation with language and signifying formations? What is its relation to the unconscious and, to what in primitive societies is called 'the sacred', and to what modern capitalist society puts aside as schizophrenia? This essay will be an attempt to answer these questions in the light of recent psychoanalytic and poststructural theory. In theorising music, a most useful tool has proved to be Julia Kristeva's practice of *semanalysis* which describes signification while at the same time analysing, criticising and dissolving meaning. *Semanalysis* combines theories of language with theories of sub-



jectivity. Kristeva draws from many diverse fields, from the semiology of Saussure and Peirce with the philosophic premises of Hegel's logic and Husserl's phenomenology, to Benveniste's linguistics, to Lacan's theories of the unconscious, giving us a critical theory based on desire, heterogeneity, otherness and distance, which seems most suitable to the study of music. But first we must look at music as a signifying phenomenon.

Music Signification and Femininity

For Jacques Attali,¹ music has always signified, even prior to the cultural/economic codification which eventuates with music's entry into the market economy and subsequent commodification which destroys its ritualistic use value, abstracting it into exchange value. Before exchange, in ancient societies, music operated according to a code that Attali calls *sacri-ficial*. Music, given meaning by the codes of the sacred, forms, domesticates and ritualises noise. Music is not innocent but, through ritual, structures power relations, enforcing and legitimising the dominant code. Attali stresses, however, that music cannot be equated with a language because it never has a stable reference to a code of a linguistic type. Music is incapable of referring to a signified object.

Following Claude Levi-Strauss, he argues that it is instead a language without meaning. This absence of meaning has been theorised. In the past, in terms of a general lack; as a metaphorically feminine object, in a negative or surplus relation to language, it rests outside any discursive social order. Psychoanalysis, since Freud, has established certain theoretical affinities between music, the unconscious and the feminine. Music has continually been regarded in the negative sense, as other, desired yet feared. More recent psychoanalytic theory, however, has shifted the emphasis from that of lack and absence to an association with reproduction and the maternal body. Theorists such as Claude Bailble² argue that the ar-



rival of the subject is effected by auditory rather than visual associations, in opposition to Jacques Lacan's theory of the Mirror Stage³ in which the child begins to resolve itself as an I and function as a subject in response to a reflected image of itself. Bailble argues that the sounds occurring through the body to body contact of the foetus and mother (heartbeat, breathing, voice etc) establish the subject's consciousness of its other. The child learns to be in response to sonorous rather than visual cues.

Carol Flinn, in an essay entitled *The Problems of Femininity in Theories of Film Music* states that music's metaphorically feminine position has allowed feminist writers such as Julia Kristeva and Helene Cixous to celebrate music as a potentially subversive force which reclaims the realm of female desire:

"In its so-called failure to produce concrete meaning, in its inability to conduct the listener to fixed references, its irrationality and emotionalism, its very invisibility, music challenges some of dominant representations' most cherished axioms, such as its impulse towards rationalism and the epistemological privilege awarded vision."⁴

However, she is quick to point out that these theories become problematic when, "the traditional claim of music and femininity's ontological, 'natural'

link is extended",⁵ sometimes leading to an argument that suggests that women and music function beyond patriarchal inscription.

For Kristeva, music is heterogeneous to meaning and signification and is synonymous with what she calls *poetic language*, (after a concept introduced by the Russian Formalists) which she says is constructed on the basis of two opposing modalities, the *symbolic* and the *semiotic*. The *semiotic* precedes and transcends signification; anterior to any social formation; it is both pre- and extra-linguistic; both prior to and necessary to the acquisition of language but not identical to language. It concerns the Freudian notion of the drives (*Triebe*) and the primary processes (displacement and condensation) which connect empty signifiers to psychosomatic functionings through metaphor and metonymy. The *semiotic* is generally located within and in relation to the pre-oedipal (pre-predicative) subject. On the other hand, the *symbolic* is the place of language and social organisation; sign, syntax and the paternal function; position and judgment. It involves the thetic phase, the identification of the subject and her/his distinction from objects, and the establishment of a sign system.

Kristeva says that poetic language is the result of a particular articulation between the *semiotic* and the



symbolic. Even non verbal signifying systems, such as music, that are based primarily on the *semiotic*, have recourse to the *symbolic*. They function in a dialectical movement involving both modalities because the listening subject is ultimately constituted by both *semiotic* and *symbolic* organisations.

For Kristeva music operates according to two distinct modes of the signifying process; the *phenotext* (communication and logic) and the *genotext* (*semiotic* rhythm). For Levi-Strauss also, music is determined by a system composed of two grids;⁶ one physiological, of natural organic rhythms; the other cultural, involving hierarchical relations between tones and the culturally accepted meanings attached to certain combinations of notes and temporal relationships. According to Levi-Strauss, music has the "power to act simultaneously on the mind and the senses, stimulating both ideas and emotions and blending them in a common flow".⁷ So it can be seen that while the place of music, in its 'pure' state, is largely that of the *semiotic*, it does, however, operate according to a cultural logic that rests within the *symbolic*.

Music and Sacrifice

According to structural anthropology, the sacrificial

act regulates semiotic pre-symbolic violence, and by focusing violence (or a representation of violence) on a victim, displaces it onto the symbolic order maintaining the social norm. As the social order is founded on representation, sacrifice shows that representing violence is enough to stop it and impose social coherence. The sacrifice is not a celebration of violence itself but rather a positioning of violence within the *socius*. Lying within the realm of substitution and metonymy it resembles the unconscious and is thus structurally indispensable to the systemisation of language.

Attali states that music organises society and creates political order because it is a minor form of sacrifice. For Attali 'noise' is violence, destruction and original chaos, a primordial threat of death, music is a channelisation of noise, it is, in a strategy which runs parallel to religion, a simulacrum of ritual murder which serves to integrate and channel, anxiety, violence and the imaginary of society, contributing to the socio-symbolic order. Music orders, domesticates and ritualises noise, tying it into the cultural matrix of the dominant order.

But music is also transgression. Kristeva believes that music, along with art and theatre, as a practice which precedes and accompanies the sacri-



ficial act, deploys an expenditure of *semiotic* violence which transcends the symbolic and dissolves the logical order. Music produces an uneasiness which goes with regressing to a time prior to the mirror stage. By reproducing gestural signifiers the subject crosses the border of the *symbolic* and reaches what Kristeva refers to as the *semiotic chora*; an economy of the drives and primary processes, which articulate a psychosomatic modality of the signifying process of rupture and articulation (rhythm) that both precedes and transcends language. It is the underlying force of figuration, a place of no thesis, the antithesis of judgement, for Plato, nourishing and maternal. Music then, as a process, as a *semiogenesis* of the *symbolic* permits a flow of *jouissance*⁸ into language cracking the socio-symbolic order and revealing the facilitation of the drives in the linguistic order itself.⁹

Music and Narrative

This idea is taken up by Deleuze and Guattari, for whom music is a block of becoming at the level of expression: a becoming woman, a becoming child, a becoming animal, a deterritorialisation of the *socius*, producing dangerous pleasures in a multiplication of the senses, veering towards destruction, breakage and dislocation. Music through the cultural const-

ructs of melodic and harmonic coordinates, reterritorialises upon itself. The tendency of Western diatonic music is to plunge us into negativity but then immediately return us to the safety of the thetic, that is to the tonic, the original tone, the refrain. Dissonance is introduced to produce anxiety which will quickly be overcome with a return to harmony and order. Such music aims for closure in the narrative sense, obliterating differences and producing a sealed text. In this music the death wish is sublimated. Attali suggests that in this way music mimics the ritualisation of murder and thus participates in the imposition of theological constraints. Music provokes disorder and then proposes order, it is a form of myth whose code, governed by the rules of narrative simulates the accepted rules of society, semanticising kinship and social relations and reducing the social organism to the structure of the family. So it can be seen that while music, as a threat of death, has the potential to penetrate the socio-symbolic order with jouissance, thus threatening the unity of the subject and the social realm, it has instead, historically engaged in its own reterritorialisation through cultural (political and economic) codification simulating and fulfilling the role of religious prohibition and the denial of jouissance through social constraints.



Music, however, continually escapes codification and reterritorialisation by introducing 'noise' (interruption, interference, disruption) into the structures of the dominant musical networks. Many modernist movements in music constitute noise to traditionally accepted musical forms. Atonal music and musique concrete challenge the authority of tonality. The indeterminate theories of Cage, Ashley and Wolff disrupt the traditional notions of composition and performance. Avant garde jazz, with its disregard for a priori key relationships, breaks with traditional diatonic jazz and becomes an *unsatisfied process* rather than a closed text. With the advent of sound recording technology the very conception of what constitutes 'music,' the distinction of music from noise, is put into question.

Music and Rhizomes

As with the music of high culture, popular music develops according to an internal dialectic where musical movements or styles define themselves in response to what has gone before. Punk was a direct attack on the modes of production of the rock industry as a social economic apparatus. Punk and post-punk musical forms functioned as anti-music, (or more precisely, the anti-symbolic in music) and

pointed to a return to the void, noise, death, the *semiotic*, shattering the cultural-symbolic grid, and obliterating meaning. Rhizomatic¹⁰ music of transformational multiplicities and transversal movement; of ruptures and malfunctions; anti-genealogy, anti-memory; heterogeneous; played by amateurs and incompetents. Music of plural dimensions, that overturns the very codes that structure it in a moving play of signifiers; non hierarchical, abstract, disembodied and decontextualised, defined solely by a circulation of states and becomings.

Musical movements such as musique concrete, cut-up, punk, dub, rap and hip hop, are involved in a signifying process which escapes the constraints of the *symbolic* and break through to a topology of the body and the drives. These are musics of process, as opposed to musics of completion. The structure of Jamaican 'dub', for example, in direct contrast to traditional Western musics, has no culmination and termination points, but is rather a continuum with multiple entry and exit points. It is a heterogeneous assemblage, against a false conception of voyage and movement. Dub foregrounds negative spaces and brings attention to silences which function as important structural elements of the music (as in Cage and traditional Japanese music). Dub is essentially,



in its methodology, a music of subtraction, a succession of plateaus.¹¹

Black rap or, hip hop, Africanises¹² American popular music by accentuating polyrhythms and grafting pieces of already produced music together (by scratching and sampling other records) extending the creative and rhythmic possibilities to create a composite assemblage of conflicting elements in a dialectical relation (as in the sense of Eisenstein's *Dialectic Cinema*). Raw uncommercial hip hop, as musical montage (in the tradition of musique concrete and cut-up) favours disruption over unity; collision over linkage; noise and atonality over harmony. It is a music of fissure and contradiction in which the subject/listener escapes the judging consciousness of the ego cogito and loses him/herself in the rhythms of the semiotic and the body.

Music and Myth

In capitalist society strategies of negation quickly become commodified and mythologised. All apparently spontaneous rituals and manifestations are dehistoricised, naturalised and converted into myth. Society protects itself from negativity by the creation of myth and commodities. In popular music, negativity is soon sublimated; rupture and dislocation are

smoothed over; power is restored to the signifier and the subject is reconstructed in her/his rightful place within the structure of the family state and religion. Music is thus reterritorialised (or oedipalised). The anarchic destructive energy of punk is channelled into a homogeneous prepackaged spectacle of enclosed negativity. This process of reterritorialisation involves a normalisation in which multiplicities are reduced to singularities, gestures of dissent are disarmed and classified, and signification proceeds according to the dominant ideology: "so its come and get your punk in Woolworths... it always comes a round... they make it safe".¹³

Music and Reterritorialisation

In disco, and more recently 'dance music', the raw *semiotic* rhythms of Afro-American music (funk, soul, hip hop, gogo etc) are filtered and homogenised. The jarring disruptive elements, such as the scratch and the cut, are normalised. In packaged disjunction; redefined and confined by context; in a supplementary relation to the constant beat; differences, interruptions and gaps disappear. The scratch, once functioning as noise, rhythmic device and reference to the means of production (making music directly from other records), becomes instead superficial dec-



oration; a mere commodity; "another patch on the synth".¹⁴ The dance floor is the site of harmonisation and reterritorialisation; simulated *jouissance*, sampled, placed under glass, commodified and reified. It fashions a consumer fascinated by her/his own identification with others; with the image of success and happiness. The lost connections to the body are restored through the drives only to be commodified through a false integration. In ritual consummation and identification, sensual energy and expressiveness becomes a mere simulacrum and the restraints of religious prohibition return. In the nightclub we experience continuity; the return to harmony; the exclusion of noise; the channelisation of the anarchic libidinous activity of the drives into the order of silence.

Music, in my opinion, is a signifying phenomenon which produces meaning on two fronts; on the *semiotic* or physiological axis, and on the *symbolic* or cultural axis. Although the ambiguous and ineffable characteristics of music are often claimed by feminists to represent, in a positive sense, the subversive currents of the feminine, music should not be considered in isolated language and cultural formations as it cannot, ultimately, escape patriarchal and economic codification. In other words, although it is con-

sidered as language's Other, there is no music which can be said to operate entirely within the bounds of the *semiotic*. Music's role in society seems to oscillate between regulation and subversion, and these codings and recodings occur in different ways. On one hand, within the paradigm of social conditions preceding music's transformation into an object of exchange, music is reterritorialised upon itself through the operations of religious ritual, the restraints of a cultural logic and the conventions of tonality. On the other hand, as the production of music is bound more closely to the economic networks of mass consumption, music is reterritorialised through the cultural logic of capitalism, producing a consequent shift in meaning.

Marginal musical movements such as punk and black music, even though they may quickly be reterritorialised and normalised, do have a profound effect on the listener/subject by means of a deconstructing/restructuring process. The subject always returns to the order of the symbolic but this *new* subject is never quite the same as before.

Footnotes

- 1 Jacques Attali, **Noise: The Political Economy of Music**, Trans. Brian Massumi, Manchester University Press, 1985
- 2 Claude Bailble, **Programming the Ear**, Trans. Noel Sanders, University of Technology, Sydney, 1987
- 3 Jacques Lacan, **Ecrits**, Trans. Alan Sheridan, Tavistock, London, 1977, pp. 1-7
- 4 Carol Flinn, *The Problem of Femininity in Theories of Film Music*, **Screen**, vol 27 No.6, 1986, p61
- 5 Ibid. p 61
- 6 Claude Levi-Strauss, introduction to **The Raw and the Cooked**, trans. John and Doreen Weightman, Harper and Row, New York, 1969
- 7 Ibid. p 28
- 8 The French word *jouissance* has no direct substitute in English. It means both enjoyment, in the sense of legal rights and political privileges, and pleasure, as the shattering pleasure of sexual climax in which the cultural logic of the ego-cogito is dissipated in a totality of enjoyment.
- 9 According to Kleinian psychoanalysis, the drives involve pre-oedipal *semiotic* functions and energy, that orient the body to the mother. The unconscious, facilitated by the drives and primary processes (displacement and condensation) connect empty signifiers to psychosomatic functions (or, at least, link them through metaphor and metonymy).
- 10 Gilles Deleuze, Felix Guattari, **Rhizome, A Thousand Plateaus**, Trans. Brian Massumi, University of Minnesota Press, Minneapolis 1987. pp 3-25
- 11 Deleuze and Guattari use the word *plateau* to describe self vibrating regions of intensities whose development avoids any orientation towards an end. Hence they describe their book, **One Thousand Plateaus**, as an open structure which can be accessed at any point, ie as a succession of plateaus.
- 12 Cornell West, *Out of Motown, Oasis*, Semiotext(e) 12, vol IV No3, Columbia University, New York, 1984. p94
- 13 Patrik Fitzgerald, *Make it safe, Grubby Stories*, Small Wonder Records 1979.
- 14 Anna Munster, *The Cutting Edge, Earshot*, 3rd Degree No 4, 1988.

Phenomenal culture

Ashley Scott

There are a number of prospects that describe spaces - models or surfaces, bounded by limits of intensity, duration, density and other parameters. If this were to speak of a metaphoric group of dimensions, ordering a temporal production - sonorous or poetic, it might be thought inadmissible for its visual/sculptural connotations.

That such a line of thought is *not a metaphor for music*, is confirmed in the characteristics of bridging the gap between two constitutive poles of music and the sonorous; the plane of organisation and the immanent, phenomenal plane of sound.

Unquestionably, events occur in a space or time reserved for, designated as: 'music or audio arts', etc... This is probably the zero degree of the sonorous, (although it might also occur within the head or pretend to be something different). This occurrence is here called expression, *the (complex) movement of realisation* - thus it tends to embrace both the physical and aesthetic uses of the word. From formula and intuition, which are already events, to a durational, complex, or 'global event'.

In the absence of 'a summary' of what may be alternatives to a philosophy of music - by default (from Plato to Bernstein) it is convenient to consider these 'sonorous expressions' here, as propositional. To compose, to hear - as to note the processes of constitution, transformation and dissolution of immaterial media - this involves only a consideration of the physical and the manifest (as the elaboration of potentials within the material, the methods themselves - this is the particular creative axis to be considered here).

The expression is perhaps inseparable from its material/immaterial constituents;

"Certain modern musicians oppose the transcendent sound plan(e) of organisation, which is said to have dominated all of Western classical music, to the immanent sound plane, which is always given along with that to which it gives rise... Or rather it is a question of a free-floating of time, Aeon, a nonpulsed time for a floating music..."¹ Or rather an attempted synthesis - crash of the impossible dream - making the plan(e) of organisation audible?, the sonorous structural? Of course this is already so, to a certain degree; the pause or tutti refers to a plan, environmental sound or white noise signifies probabilistic distributions, populations. Is it really a problem to do with structures here?

If one accepts the view that time is the only unifying concept of the temporal art (as any assemblage is qualitatively unified) - then music is at the point of becoming a branch of poetics, audio arts, a sort of literature. It is similarly insufficient to deal just with a libidinal economy of sound-intensities. These concepts are hardly exclusive and were never really proposed as such.²

The temporal arts consist in the deployment of

sonorous elements in a compositional duration and space, even if this is not delimited beforehand. The fact that these elements are signifying or referential is a second order characteristic of structure - is implicit, or a result of placement in a sequence. The events must be first thought, actualised, or simply perceived and this is a process which is conventional (as an established symbolic system, ie; harmony), referential (the indexes within an environmental recording), or statistical (isomorphy of event-distribution). What is of the greatest importance is the potential of intuitive intervention in the process, to prevent the work becoming a document of the compositional stages.³

It is best to start at a theoretical point, the false opposition which seems to have occurred at the level of sonorous modelling - determination of a 'sound world' which might characterise the work at hand (this term is of course very bad, what other could one use?) aspects of metric, textural, harmonic contents, etc...

There is an assumed substratum, which is made of paper, or time (depending on the approach). This would be 'silence' - that which Cage describes. In his account it is already a populated space, of intensities and distributions which he does not care to analyse. It is surely a 'life music', sufficient in itself. But. There is also a composition lesson here, a 'music of life' which leads to the realisation of more complex overall events with an internal non-organic life of their own.

This is *rarefied* via an orchestral or electronic production of such a model, it presents not realism, but an affirmative proposition - of a non-mimetic 'molecularity'. This is a forming from the smallest events - the key to this process is via modelling, the simulation of complex environmental processes, the redrawing of a causal model, or taking an isomorph - a statistical sampling or a predictive method from an unrelated science.

This is also a combinatorial proposition, considering all parameters we choose to place upon sound-events as manipulable by a range of techniques in use today: by polyphonic, serial, improvisational, logical or stochastic means.

Serial music was always split on the issue of consistency - the oscillation between the sounding music, and the theory. It seems that the former always looked ahead, verging on the effective management of intensities and disorder (their delimitation as musical entities) and the latter backwards to tradition, to a social accountability and communicability. That much of the sounding results are a music of pure immanence and unpredictability is certain - it tends towards several solutions, some more conservative than others.

One approach is to formalise these disordered, indeterminate progressions with a higher form of logic than that of the note-row - via mathematical proce-

dures. This was the course taken by Iannis Xenakis; to achieve a mobility between complex events characterised in terms of order/disorder, by a more flexible means - matrix algebra, probability calculation, set theory, etc...

It is a progression from this that might suggest the creation of a topology that doubly determines the vectors (as sounding events, continuous or not), which compose the work. This is a space - is expressed via topology, where in the final result, the events may only be the product of collisions and have acquired their sounding characteristics at those instants. It differs from a 'generalised' polyphony, as it determines itself as it proceeds, its vectors might not have 'names' (in the sense of writing an instrumental part). It is linked to an improvisatory usage, as it involves the determination of sonorous paths, in frequency, modulation, resonance, intensity, perhaps without even naming a content, like an empty architecture for performance.

"...it's metrics. There is the temporal flow, which is an immediate given, and then there is metrics, which is a construction man makes upon time. And we can't avoid this. Whether you are a musician or a physicist, you have to cross the same bridge."⁴

So we are about to describe the sonorous in terms of speed, slowness, and a metrics of subdivision, and these as potentially coexistent.

It is important to summarise some of the theory:

Xenakis defines three determinations of structure in music,⁵ in his aim of axiomatising musicology and analysis, and ordering compositional categories:

1) *Outside-time* category, which is the determining geometry of pitch-scales, or other criteria - isomorphic in that this is the set of all elements which might appear.

2) *Temporal* category, the phenomenal becoming of events and the combinatory field where the outside-time is articulated.

3) *In-time* category, the precession of concrete events determined by the preceding two categories. This is composed of a set, not greater than the first category, articulated in the temporal field and determined by the outside-time.

This distinction forms the basis of his critique of serial and other music, but more importantly forms the basis of an axiomatics, of (im)materials and qualities, a compositional practice which deals with an architecture of sound and consistency in the use of resources (the system, prior to any interference is self-contained), defining tendency and directionality in relation to a computed, probabilistic space. The history of this composer's methods is one of a variability in the influence of the author, pre or post-factum.

In the absence of the 'grand narrative' of tonal harmony, and even that of atonal harmony, serial forms of structuration make all elements equivalent, or derivations of an in-time element; the tone-row. This is the destruction of distinctive hierarchies, the generalised destruction of *difference*. There is an undetermined hierarchy (pitch-based) which although it leads to a promising immanence and a-sociality, is unfortunately denied in theory⁶ and is still naive in philosophical and structural terms. This is the result of operations which draw totally upon the in-time

category, basically the loss of a functional large-scale directionality. A dependence upon extra-musical impetus has occasionally surfaced in its wake - literature in the case of serialism, mimetic and conceptual thoughts in other forms.

The justification of the outside-time involves the thought of structures of specific ordering operations acting upon delineated materials (concrete or symbolic, as in a score), catching them up in a velocity. This reinstates a system of functionality, which is not conventional in the manner of functional harmony, but is the result of decisions made after an initial *empirical* phase of composition - the selection of elements and combinatorial methods.

It was one of Freud's definitions of psychosis - that a subject might perceive the details of an object as a multiplicity; a sock as a field of stitches, the neurotic's genital-substitute sock as a tubular field of genitals. This is a change in the emphasis or scale of 'sense' or meanings, whilst retaining the recognition of form.

Music is a surface of notes, of different thicknesses - stitches & threads, whatever. Now transformed in time into a continuum of speeds, breaks, continuities. Here the experience of listening comes close to synthesising the two planes as the one, as 'structural affectivity'?

It is mythic to think that this is possible - it describes none other than the romantic and divine music-cosmos, yet: one remembers losing attention in the situation of being an audience, a performer. Drifting away in boredom into music, speech, in the ennui promoted by didactics or hearing the structure all too plainly - becoming struck by the least important.

"It was this inattention to rhetoric, speech & poetry that allowed me to formulate the concepts of phonology - to postulate the irregular metrics of the voice, pitch, loudnesses all the elements. I began to think of the voice as the genetic home of all musicality - all men, all birds, all God's creatures. But the important point was this - the less I understood or was able to ignore of so-called language, the more I perceived the beauty of my objects of study and the system which encompassed them all."

The joy of phonetics lies in its destruction of conventional meaning, the substitution of a 'scientific' programme, a logic meant for classification that continually turns around to work in an artistic manner. What has been classed, is the molecular, or at least a scale; 'the smallest unit of meaning', a constitutive particle which is hardly natural or essential. This is an aestheticised view of language - after the advent of information theory it is difficult to even justify any other view.

Or perceiving speeds, rates of change as primary, the accompaniments of particularly dull operas or reputedly 'wild' improvisations have this facility - the conditions are ideal. In this way, on this, path, of hearing the molecular - or at least its expression in a velocity, as the constitution of the very large, the 'Molar', we find another field of difference in the same space as that of structure/content - one of *scale*.

A *dynamic* conception of structure, as an internal cohesion resulting from a logic, internal or external at this point, the *field* of scale has eclipsed the *opposition* of structure and sound. The loss of transcendence and metaphysical speculation to the rise of a

physicality and an empiricism of structure.

It is apparent that there may be a kind of demonstrable correspondence between the molecular (call it timbre at its most basic level, then perhaps 'texture' at a larger scale - particularly that of combined/modulated timbres) and an affective grain - which on a technical account, is not actually present 'in the music' but must constitute a referential effect of the listener, or a sign. As Stockhausen demonstrated a correspondence of frequency and speed in *Kontakte* by a glissando from pitch to meter, there is a less didactic project just in these concepts, a three way correspondence of meter, timbre and signifying or referential grain.

"...passing through the zone where perception of pitch modulates into perception of rhythm, where perception of 'tone colour' merges into that of 'melody', and thus the 'colour' is dissolved into a succession of individual 'pitches'".⁸

This is particularly important if one is attempting the construction of 'affective sets' - divisions of specific contents for allocation via similar processes to that of the formal composition itself (taking them to be formal elements, an ideational thematization) - this is a further extension of Klangfarbenmelodie, a procedure that cannot be effectively formalised as it is too specific. Two bases for this study would be the sort of phenomenology which Pierre Schaeffer elaborated⁹ in relation to sonic objects, or the meta-empiricism of structures which Deleuze and Guattari seem to propose in relation to everything. Attempts at a 'phonetics' of sound seem particularly inappropriate.

There is the other idea; that of speed, which is an affect, drawn from meter, relative disorder, affective timbres, etc... this can only be described as a 'cathexis without a body':

One example of this might be Pudovkin's filmic experiment,¹⁰ one face, repeated three times, each preceding respectively, a bowl of soup, the corpse of a young woman, a child playing. "The audience was amazed at his variety of expression although the same shot had actually been used all three times and was, if anything, remarkably inexpressive." That is montage, still affective sets - textures. But speed, which is distinct from a metrical division of duration; "...one still has to bring in a time-factor for each shot: a short duration is suitable for an amused smile, one of intermediate length for an indifferent face, and an extended one for a sorrowful expression." Speed is related to experiential time (better thought of as a *velocity*), thence to duration, the temporal: This is a conventional system, sometimes mistaken for a psychology - but there is no subject there, or a language - but there is no phonology there. This idea is both opaque and mute to analysis and only the vagueness of practice will get us any further in even considering it.

Practice in an audio-art form which avoids or disappoints the expectation of music would be the best form. Lyotard writing on Cage has been the most perceptive here - for this is right in the very heart of the 'theatre' of intensities and speeds - there is silence, he says, but there is no void - no political colonisation of this silence is possible.¹¹

3. These are all questions of a complex metrics or

modality - be it characterised as a 'landscape' - a fluid, multidimensional grouping and succession of events (as does Trevor Wishart)¹² a variable density of vectors, at any instant measured by concepts of 'disorder', or the progressive workings of an axiom which generates event relationships in pitch, time, timbres, etc. The sequence may run; from perception to composition and back again where all the intentions and concerns inevitably mix - and not just contents either - as the means of expression are always inextricably linked up with contents and conventions of expression, honesty, types of humour.

For listening, or study, this implies different types of listening, experiencing. As before, a phenomenology of hearing, an empiricism of the continuum. The former constitutes states of consciousness, attention and affect, inseparable from the textures of hearing, the speeds of perception. The latter is a more exterior, analytic process, acknowledging the law of empiricism; that it is always, somewhere, sometimes wrong.

Following Schaeffer's writing (knowing just how ill-advised he often was), which was an actual programme of one of these philosophic arts, the system deals with:

- a) a 'solfege', a formal judgement of sound.
- b) a semiotic rule, of reference or action.
- c) the cognitive process, a real 'reduction' dealing with forms of attention and coherence. This allows action (instrumental technique, compositional strategy) and perception to coincide, in notation schemes, classification tables. Amongst the electroacoustic avant-garde, a form of thought evolved which is to do with a mapping, practices which expose the correspondence of the individual or assembled event, and the large-scale grouping of actions and alignments. Kagel - the demystification of musical action; opera as sculpture, performance as rule-bound gesture in *Staatstheater*. Xenakis - the disappearance of the middle ground of the phrase and the measure, as there are only single or global events, and their coincidence. Stockhausen - hyper-conflation of the personal and the utopic global-as-referent in *Hymnen*. There are many other practices which are not obscure, which are plainly audible amongst generations of composers here.

There is always a demand upon the composer for 'a little sense', in this regard one is in a similar position to a philosopher, as well paid and as well liked. This problem, which is a sort of consistency unlike that mentioned above - a social consistency or responsibility is a demand for communication, usually via channels which are contextually obsolete for a specific sort of music or sound art. But, as should be obvious, the practices and theory of music and sound art, poetry this century have redefined an assemblage of terms gleaned from philosophy, information theory, aesthetics, logic, etc... simply in order to form a descriptive discourse around their activities. This cannot form a science, but constitutes an area of debate which is significantly misunderstood and effectively buried.

As with the visual arts, any 'call to order' to a 'basis of real or communicative values' should be greeted with the utmost suspicion.

Sometimes there is no answer, it is lost in noise -

convex, disappoint you, mock you. You step back, find yourself for a moment but move a little and you are lost. This catoptric theatre was contrived to take away your identity and make you feel unsure not only of yourself but also the very objects standing between you and the mirrors."

(Umberto Eco, *Foucault's Pendulum*, p. 13)

Analyses and Commentaries

The following analyses will look at two songs from Schoenberg's *Pierrot Lunaire* and Kurt Weill's *Can- on Song* from the *The Threepenny Opera*. They will use empirical analytical methods combined with hermeneutical approaches.

1) *Serenade*, No. 19, from Schoenberg's *Pierrot Lunaire*

With grotesquely giant-sized bow
Pierrot draws cat-squeals from his viola.
Like a stork on one leg balanced,
He plucks a doleful pizzicato.
Out pops furious Pantaloon
Raging at the night-time virtuoso
With grotesquely giant-sized bow
Pierrot draws cat-squeals from his viola
So the player drops his fiddle
Delicately, with his skilled left hand
Grabs old baldy by the collar
And dreamily plays upon his pate
With grotesquely giant-sized bow.

Schoenberg's use of the violincello instead of the viola automatically avoids the obvious reference in the text. The whole range of the cello is used to represent the sweeping grotesqueness of his bowing. For the dark low range see bar 25 also referring to the virtuosity of Pierrot in the text at 29. Again the displacement of the word association is far enough to function more as a memory and so avoid a cheap imitation. For the cat squeals of his viola, notice from bars 30 to 33 the use of the cello's top register. Again Schoenberg does not represent cat squeals, but rather portrays, in a rapsodic three/four meter Pierrot's intensity of playing, his passion.

At bar 38 notice how the music implies a more assertive two/four metric structure as Pierrot bows his viola bow on Pantaloon's head. The two/four slapstick allusions are obvious. Notice that the word *pizzicato* is never accompanied by the sound of a pizzicato in the cello directly - this only occurs at bar 10, 11 and 12 establishing it in our memories for when the singer does sing the word at bar 21. The waltz introduction acts as a prelude, a musical example of what the singer is about to tell us. The music hides behind the masquerade of a cello to tell us about Pierrot's viola playing. The musical accompaniment of the 'Serenade' achieves an independence to the text which refers to the text but still retains its own musical autonomy.

2) *Der Mondfleck*, No. 18, from Schoenberg's *Pierrot Lunaire*

With a fleck of white - bright patch of moonlight
On the back of his black jacket.
Pierrot strolls about in the mild evening air
On his night-time hunt for fun and good pickings.
Suddenly something strikes him as wrong,
he checks his clothes over and sure enough finds
A fleck of white - bright patch of moonlight-

On the back of his jacket.

Damn he thinks, there's a spot of white plaster!
Rubs and rubs but cant get rid of it,
So goes on his way, his pleasure poisoned,
Rubbing and rubbing till dawn comes up -
At a fleck of white, a bright patch of moonlight!

A close examination of the music reveals two canons between: (i) the viola and cello and (ii) the piccolo and clarinet. Why has Schoenberg used canons in this song? Is it purely for reasons of generating the music. Obviously yes, but then there are many other formal processes which could have done so as well. *Pierrot Lunaire* is about a Pierrot who looks at the moon and sees his own reflection. The work is literally scattered with various types of canons. In a sense the *comes* is the reflection of the *dux*. One part following (reflecting) the other. Furthermore a close look at these two canons reveals that they are both retrogradable around mirror points. Canon (i) the viola and cello at bar 9, on the fourth quaver; canon (ii) piccolo and clarinet, at bar 10 on the sixth semiquaver.

The text refers to a white moon fleck on his back following him. Note the canon in the viola and cello. Here is an example of word painting in that the short-demi semi quavers are obviously referring to the irritating moonfleck. However it is not such an obvious equation because this rhythmically persistent moonfleck is continually regenerated by the use of the canonic devices explained above. Again the use of a canon seems highly appropriate in that one part is following the other: the moonfleck on his back. Note also that the mirror points for both canons occur when Pierrot checks his back. He turns around and looks back; the canon turns around and looks back. A closer look at the piano part reveals that it also is canonic. Compare bar one right hand with bar two left hand.

Pierrot Lunaire and its cultural context

Pierrot Lunaire is not only about words and music but is also a collision of diverse esthetics. It is sophistication combined with decadence. The composition is considered to be an ironic cabaret work obviously referring to the German cabaret of the period. Schoenberg's singing direction, as revolutionary as it is in the Western repertoire, is also not too far away from the cabaret singing style of the late nineteenth century. In this work Schoenberg has collided two very oppositional esthetics:

- i) the developmental formal processes of the German art music tradition, and
- ii) the popular musical forms of the day found in cabaret.

Hence the work produces an irreconcilable contradiction. Popular forms rely on repetition as a main means for communicating musical ideas, however Schoenberg's own musical style was based on continual variation. To repeat something exactly was anathema to Schoenberg which is why the music from this period is so transparent, fluid and mobile. Non-repetition produces a sense of amorphousness, vagueness, indefiniteness. We must also remember that this period of composition was heavily influenced by the intellectual spirit of its times. Freud's theories on hallucination are an appropriate reference point. Schoenberg's work from this period can also be perceived as musical hallucinations; musical visions.

Ambient domestic sound

Ruark Lewis

What is registration

(a) If materials are plotted in an all encompassing multi-directional grid system, where the matrix is registered in multiple values - positive and negative, using calibrating devices so that the result is measured and is comparative, ie relative - then a universal condition may be formed and maintained.

(b) If depth of field were falsified in the cause of composite poetic dramas to the extent that they stage a literature of posed symbols, definition would be contained unable to shift, dissipate, enlarge, decrease, disperse, reform or deform, change or break apart within time.

(c) If a single object could be observed, it could manifest the materials of all other objects and display multiple characteristics unrelated even to its particular elements - and the object would measure, be weighed at, be disguised by and still equate to itself beyond any single facet. It can be relative, time-based, amorphous, yet flux prescribes the forecast of its appearance.

Such plotting could facilitate compositions, changing them from standard composition to superlative ones where all moments then oscillate or in fact appear invisible or are imperceptible and are blank.

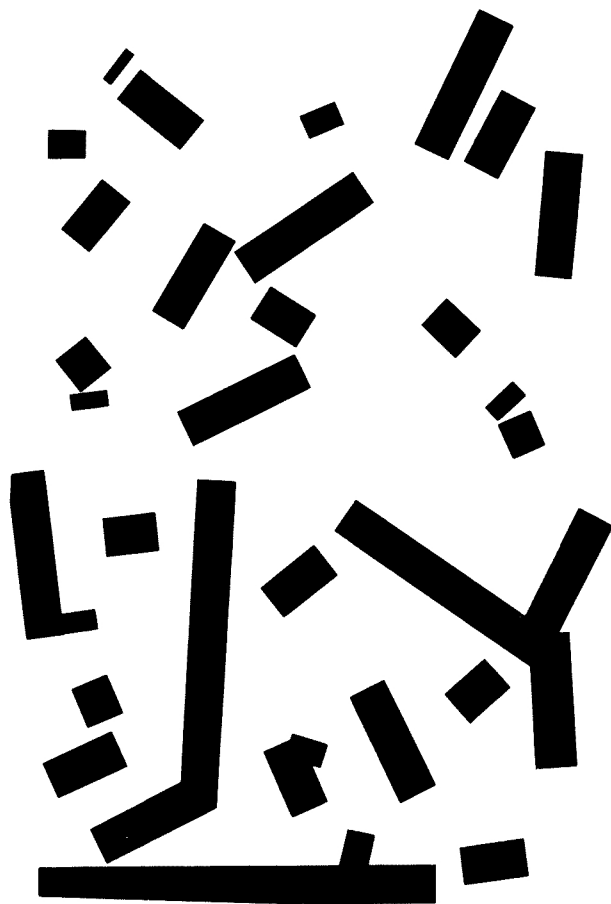
Suburbanism

Internal and external sound is contributing to the nature of the living environment. By recognising the domestic network of sound and noise produced; being alert and moving, agile yet unharnessed, we experience an original intention also as a diffused grey-ness. Within the 'household', sounds are generated by variable objects and affects. As much domestic territory is engaged with numerous mechanical and electric devices, coupled with physical actions, climates, the dynamics of architecture, effecting cultural, spiritual and psychological states, we are able to create a further position that decides how best to direct the courses of any single object's force.

To replace the house, school and workplace (all connected by a lacework of streets and expressways) we can invent a system, in this case a graphic system that patterns characteristics, describing in order to illustrate adequately the sense of place. The familiar sounds are doors slamming; taps running water, leaves rustling, birds, the percussion of knives and forks, somewhere a radio or television, telephones, amplified musics, trains in the distance, a person next door coughing, sneezing, breathing and talking. All these elements maintain a force that extends beyond a specific application which concludes in a grey confusion. Individual elements or objects do not constitute great significance although as household effects they can be taken up from their familiar positions and rescheduled into a greater more deliberate sequence of action. Overall the potential to

schedule action gives each element a more extensive life-plan and meaning.

By measuring the spatial relationships of elementary domestic sound, composition and construction is immediately assisted. A system is designed to order and then direct the value and measurement of sounds and noises. The system then facilitates a structure that incorporates thoughts and feeling within an act of interpretation. The domestic relationships are maintained and distilled in the accents of the compositional structure. Changes to the interrelationship of noise travelling within spatial divisions respond to the compositional intention. This process will systematically inform any further structure, saturating the identity from that environment of which it stems offering the foundation to any secondary structures. The intention of the underlying design is significant because of its architectural potential. The design effect of this nature is capable of manipulating the perceptibility of an environment by exact employment of a constructive procedure. With this investment the tormentor can make the suggestion that light waves



Domestic Ambience at Cronulla

maintain a much greater control over the elements and sounds that they emit or reflect upon.

The cause of retuning the structures of nature, (the remaking of the sequence of household actions) forecasts the destruction of the conventional value of instruments and orchestration. A retuned urban sprawl, the redevelopment of space as a gamelan city, is a fundamental object that all contemporary society will look forward to.

Ambient domestic sound is a source for pure abs-

traction. In the registration of the initial intentions and its natural sequence, analysis may open another facet to our experiences of a nature of perception.

By enlisting urban domestic sounds and noise in this way, distinct and original spatial configurations that share a formal identity, can offer an unprepared audience a familiar pattern, and thus we may be able to go beyond the preposition of a logical material reading of the subject matter at hand.

Musica Speculativa and sculpture

Joan Brassil

I am a sculptor interested in phenomenology of landscape, that is to say, that which is already there in existence. Within this context, sculptural forms of 'found objects' and ephemeral processes are frequently used where 'found sounds', as forms in space, may

make the sculptural context. The instrumentation of **Musica Speculativa** has supplemented form, indeed in some cases supplied the form of the sculptural content, within the space of the installation.

Dick Higgins described the Greek Musica Speculativa (from the Latin *speculum* - mirror) which reflected reality,

"it might or might not be performable but even if it was, its point was in the condition of existence".

In concluding the essay, discussion is engaged from an ecological and environmental perspective.

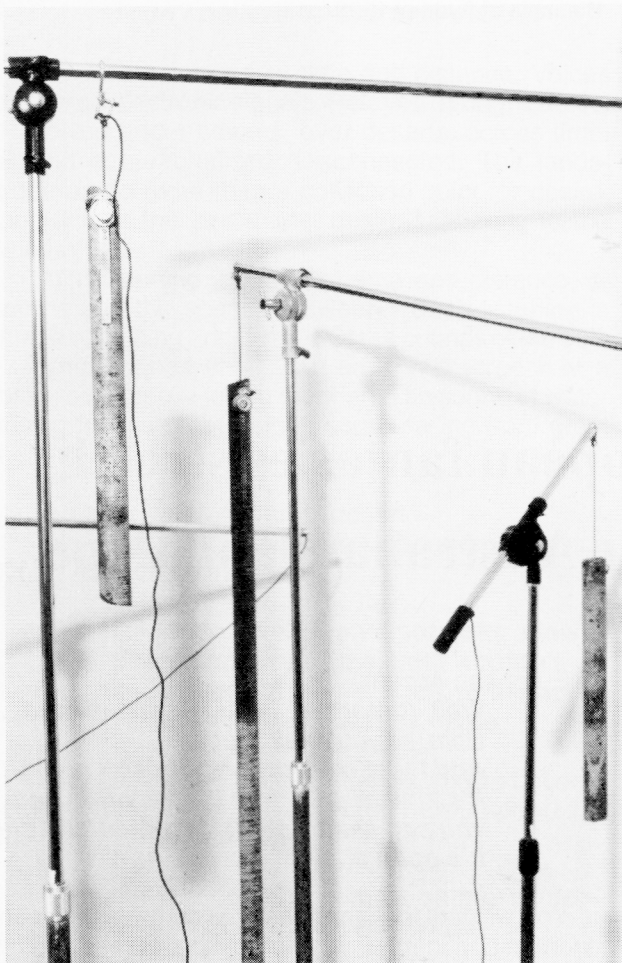
"Like most beginnings they may be frail. But we are not just modern or post modern today, we are 'pre-millennarian' and it is up to us to determine what that means".¹

In this transmedia era, with the advantage of electronics, extant inaudible sounds may be transduced and recorded to present or augment 'found' sounds. The varied forms of the phenomenological sounds used in my installations over the past five years have all resolved certain spatial connections with ephemeral visual structures.

In *Perspecta* 1985, the reflected video installation **Through a Magnetic Field Lightly** had space augmented by use of Charles Dodge's sound recording **Earth's Magnetic Field**, where Bartel's indices of solar winds playing on Earth's magnetic field were used for the resultant synthesised effects of the glissando sweeps, making another space effect of music outside the sphere of the Earth.

Again in the Sydney Biennale 1986, an installation based in ecology **Consider the Fungi at the Interface** used sound in two horizontal layers, joined by vertical chords, in order to integrate with the environment of the location.

The location was a large wharf on Sydney Harbour almost underneath the Sydney Harbour Bridge, the



Installation from the Sculpture Triennial 1990

sound scape being the constant lapping of the waters under the wharf, and the trains above intermittently crossing the bridge - an extended *double forte* sound - with envelopes of sound contained by the movement of the trains, varying from whether the crossing was made from the Northern or Southern approach to the bridge.

The lapping of the waters - a horizontal sound - was augmented and fed into a sound track of a reflected video of water, whilst in an elevated horizontal, the bridge trains proceeded in their own time frame of 'artistically' random condition.

To link 'microscopic fungi threads' into such a soundscape by a 'vertical' chord is a challenging task. With the aid of a synthesiser, Warren Burt composed chords from Fibonacci numbers for 'natural growth': taking the numbers between 1 and 21 he made chords which penetrated the space with slowly changing verticals between the two environmental components. The non melodic series of chords of slow inner rhythms and slightly varied throbbing, for the 'sound of life', made the connection between two existing sound elements.

Again the expansion of space by the use of sound was made in installations of Australian landscape of Western Australia and the Central Desert. The sound was made from the action of wind through telegraph wires. These sounds were recorded by the placement of piezo-electric transducers on to the wires themselves for the recording. The results of these sounds of the natural phenomena are collaged into a continuous composition, giving the form of landscape

where the sounds could have originated, undulating dunes or the savannah.

The entirely random rhythms as they occur and the separation of tracks by stereophonic tapes, construct a form and atmosphere as a trans media experience in the visual arts. The works **Journeys on the Winds of Time** and **Spaces Between** were collated by Alan Lamb of Western Australia. The installation was exhibited at *Ars Electronica*, Linz Austria 1989. A work currently in process is **Randomly - Now and Then** to be exhibited at the 4th Australian Sculpture Triennial, at ACCA in Melbourne September 1990.

Here taking the phenomenology of rocks from various subterranean depths, transducers are affixed to them and power transmitted to the rock's resonant frequency. The resultant sounds are uniquely resonant according to various crystalline structures. The timing is regulated by a programme for 'randomness', taking the 'on' and 'off' times as random numbers of seconds between 2 and 200, with unpredictable sounds and silences.

In keeping with the current theory of Chaos with nature of unpredictability, this random sound work operates in an arrangement of minimal structures, as an instrumental installation relating the connecting of lines of sight and sound, between the sounding object and the viewer, the constantly changing implied web of linear connections.

Footnote

1. Dick Higgins *Music from Outside*, Catalogue for the 8th Biennale of Sydney 1990. p130.

Untitled

Sherre DeLys

The long distant hum of European fantasies stretched on silver strands across the Australian landscape...

You lift the receiver and put it to your ear. There, in the secret passageways of your ear sound flows - like liquid.

I get off on it so much!

Voices murmur - and meander.

Sound flows from the receiver into your ear - an exchange so private it's like looking at a secret photograph; one kept hidden away, to be taken out, to be looked at only when no one is there. In the most luminous darkness.

European Accents

Well, (breathes) I just had a bath and...

Uhm, so you're all squeaky...

And I just have something soft and it's kind of silky and it's very thin and you can see through it (coquettish) and it's open at...

You will feel that your desire is on a faraway continent, a continent of your imagining, across oceans and deserts.

Oh, it's warm here. It's so warm tonight!

You'll wish to scrawl I WANT over and over and over across the desert terrain.

I'll bet you don't wear a bra.

You'll wish for the sound to surge into and fill the outlines you have formed with your desire.
To overflow and to drown it.

*You don't mind if I open up the buttons
and I'm looking at myself...*

No, I don't.

*Ooh, I'm getting goosebumps. (giggles)
(higher pitched) Your voice is incredible too. I can't believe it!*

(whispered) Are your lights out?

(breathes) They are now.

Ummm.

(laughing) Have you taken your blouse off?

Listening sets you adrift. Sounds float. Voices cut loose from their moorings. Such acoustic space can be wide and deep as oceans.

Yes! (laughs) It's on the floor, my dog just ran away with it.

The intimacy of the pressure of the receiver against your ear is illusion.

I can't believe it - this is FAROUT!

Fantasies charged by time and distance. Voices rendered electronic signals. Relayed through cables. Resolved under oceans, over deserts, across time. Sound deterritorialised. Disconnected. The landscape as no more than a collection point for desire; and across the landscape, desire scattering to the winds.

Such listening is made of time and distance, of words and the spaces between. Such listening is made of longing and desire. Of the sounds of the self.

Other sounds enter your ear. The screech of a black cockatoo. Rolling thunder. The sound of water falling from a great height, sound falling from great heights.

You hear the transparent desert.

The voice of the Australian operator, speaking loudly to traverse the distance...

Gadooga...well, we've got quite a few people on properties, but I wouldn't know them by name...I talk to them, but I wouldn't know them by name.

Your ear pressed to the receiver, you've become lost in what you hear. Lost in the desert sounds, in the spaces between words,

...if you could give me a bit more information, it woulda been better.

afraid of the thinness of the voices,

***And your body...if you're tall and slim
and slender I'll bet you've got nice firm
small boobs.***

afraid of listening in, long-distance... to distance.
The sound seems to end in your ear.

***Well I haven't heard of 'em dear, and
I've checked with the postmaster and he
hasn't either...you see there's a few of
our properties that are that far out they
could also come under Walkanya.***

You're unsure of where the sound of distance emanates from. Of whether it is in clickings and whir-rings, in telephone wires singing in the desert wind...

Or is the distant sound in your body? Is it in your body the sound of water falling, of falling sound?

Telephone rings in the distance.
Lifts receiver...

Hello, how do you look like?

Well, my hair is long and red and...

Ooh, my colour, Flaming Red!

I really like it because I don't do anything to it -

it just goes you know?

Is it thick?

Where do you hear distance? in the blood? through the bones? Which parts of you trace inflections of European accents, are swept along in the currents of speech, inhabit the spaces between words...

measure with sound?

Dressed-down notes on an untitled piece by Sherre DeLys created for **Loose Connections**, a programme of short soundworks heard over the telephone, curated by Noelle Janaczewska, The Performance Space, Sydney, for Perspectives 1989.

Inspirational- Jean 'soil me' Baudrillard and Dolly Parton, The Great Pretender. Sherre DeLys c/- Pedestrian, P.O. Box 213, Pyrmont, N.S.W.

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Music/theatre as a theatre of ideas

Richard Vella

The purpose of this lecture¹ is to broaden the narrow definition of the term music theatre. In a sense this paper will take the term music theatre and turn it on its head to mean a theatre of music.

Music/Theatre?

When discussing a music theatre it is important to acknowledge that the term consists of two words: music and theatre. A definition of music is very difficult requiring a historical survey of the various applications of the term. However in very simple terms, music can be said to be a 'desired' sonic event. This sonic event can involve pitch, duration, timbre, frequency, rhythm, etc. Of course this simple definition makes no differentiation between the word 'music' and the word 'sound'. This is intended as it is important to understand that I consider a music theatre to be concerned with the construction and application of a sound or music and its relation to other elements. These other elements can be visual, verbal, gestural, literary or another *sonic* event.

The word *theatre* has many references, it being a mixing of terms from the words *metathesis*, to transpose; *theme*, from thesis; *hypothesis*, a suggested basis; *theory* (*theoros*), something examined; *theasthai*, a spectator. The actual word *theatre* comes directly from the latin *theatrum* meaning a place where people watched a *drama* (action, something happening). In other words a viewing space. It is unfortunate that the word theatre has come to be associated with a particular type of theatrical style involving plots, dramatic realism, actors, and the written word (the play) just as much as the term music theatre has come to be associated with the performance events and happenings which took place in the sixties.

However by going back to the derivations of the word theatre, interesting contradictions arise. If theatre originally meant a viewing place where a spectator watches something happening, how do we come to terms with the obvious contradiction in the term music theatre? Music is a sonic event, and theatre is supposedly an observed event. (Although radio plays dispel the notion that theatre is about seeing, as any blind person will tell us. Opera on radio is another one). Theatre can really only be satisfactorily addressed by the presence of a spectator (*theasthai*) being aware of an event happening. In other words theatre is about action, and it is in the many constructions and applications (via specific technological process) of this word 'action' which defines theatrical genre. Hence the term music theatre can mean:

i) music as action (eg. the concert hall where we go to listen to (view) music). Remember also Strav-

insky's statement that any performance of music is automatically a piece of theatre by its sheer presence. Something which many people have misunderstood by thinking that a music theatre is an overt visual gesture with music (eg: musicians wearing funny noses, or an opera production that is all dressed up with nowhere to go, i.e. massive design budgets)

ii) music with other actions (eg. film, ballet, videos, plays, opera, etc)

iii) combination of the above

The implications of what I have explained automatically call into question the validity of the term music theatre, as definitions i), ii) and iii) can include anything. Consequently if everything can be perceived as a music theatre how can we begin to discuss it?

Music theatre as a theatre of the ear

Music theatre is concerned with a theatre of music. A theatre of the ear. Why do we call a concerto dramatic? Because it is about action between a soloist and an orchestra and that is its theatre. It is no coincidence that Mozart, as well being considered a master of the operatic form, was also a master of the classical concerto form.

Music theatre is also music with a *thesis* (an argument). And it is this argument in the music which is of crucial significance to our discussion. How is the music being *constructed* to have a point of view or for that matter differing points of view? What is its relationship to other elements, be it words, film, dance, images etc? What relationships are being set up within itself via the various use of the musical parameters (pitch, rhythm, timbre, register, etc.) in order to create the musical argument (*thesis, theoria*)?

Having hopefully thrown out the door the superficial understanding of the term music theatre let us now outline a method in order to discuss it properly. How is it even possible to discuss a music theatre today in the age of the mass media? Are there different questions involved or are they the same ones in different guises due to the different technologies involved? It seems naive to separate the film music genre from the opera genre due to its technology when clearly film music has continually referred to opera throughout its history. I am not saying that opera is more important than film music but rather, we now live in a time where similar musical arguments show themselves across many genres whether they be radio, film, theatre, orchestral music, etc.

In order to discuss these musical arguments and their relationship to other elements it is important to ask:

i) does the music have a separate function in rela-

tion to the other elements and what message does this communicate?

ii) does the music when combined with the other elements create a new 'meaning'² independent to the music when heard on its own?

iii) is the music irrelevant to the message communicated, being merely background material (i.e. a tautology)?

Music's relationship to a text. Which text?

However what of music in relation to itself; its own parameters? How is it possible to discuss music itself as a music theatre when the above three questions are referring to works of an interdisciplinary nature? A possible answer lies in the original meaning of the word 'text'. Text does not mean words but rather the word text comes from the latin *texere*, to weave. *Textum* came to mean the tissue or web of a thing which is woven. The *texture* is then anything that is woven, the quality of the weave. In other words the text is the weaving together of all the elements into a shape, fabric, form. In music this came to mean texture. The text of a book or essay is the weaving together of all the various arguments via words. In film and opera the text is the weaving of the sonic and visual via their respective technologies. Texture is the fabric, text is the argument.

The setting of words to music is not simply text and music but rather the text is the overall weaving of the literary text with the musical texture. The text is the 'meaning' (argument) the composer wants to communicate via all these elements. Even in a work without words the 'text' of the piece is its argument. Its *thesis*. And this is what a music theatre is essentially about: the viewing (perceiving) of a thesis, theory, metathesis via music (action in sound) and its relationship to the text (the overall web).

However, the 'text' in a piece of music can also include the instrument that the work is played on, in other words the repertoire of the instrument or the historical/cultural assumptions that are associated with a particular instrument. The development of repertoire, like the above statement referring to genre, is about the musical arguments challenging the existing repertoire resulting in a development of the repertoire. And this also is the site for a music theatre. (Consider Cage's Prepared Piano pieces). When discussing the relationship between the music and the text, the composer has to understand which text he/she is dealing with. It may be the larger complicated fabric involving gesture, voice, words image etc (eg film, opera) or a canon of works which the composer is referring to.

The text can also include the instruments upon which a music is played (eg. Beethoven piano sonatas). And so the above three questions are really asking: What is the text and what is the music's relationship to the text? By asking what is the text, we are able to outline a method for articulating a music-theatre. Music theatre is not about a musician wearing funny noses playing a trumpet into a piano, although if faced with such a situation the question to ask is why such an event is taking place. Is it crucial or irrelevant to the overall text of the piece. How is the text of the music, the text of the performer's body, and the visual appearance combining to create a

larger text? Music theatre is the site of the collision between a theory and a practice.

WHO'S ASKING

Are you depending on the words

Or are you depending on the music?

Each one is at the mercy of the other.

Conveying thought or feelings?

What is the message?

To sing is to only half say something,

For where does the message lie?

When the words avoid it and the melody serves it?

(From *Layer on Layer*, by David Chesworth)

Music and Space

Remembering that the word *theatrum* means a 'space' in which a spectator observes an action, i.e. *drama*, it is essential to understand the concept of the word 'space'. To put it simply, there are two types of spaces: physical space and a more abstract one called temporal space. The physical space can be a performing space, a stage, a TV screen, a projected photographic slide, a shopping mall, a street etc. In musical terms it is also the registral space of an instrument or group of instruments, ie high, middle, low or the physical movement created in stereo panning (eg. left to right) or phasing. It can also mean a harmonic space, i.e. the intervallic distance between pitches. Examples of temporal spaces are musical forms (the relationship between one space and another space) or stylistic references (historical spaces). In order to fully understand a music theatre (or music as a theatre) it is important to comprehend the relationship between physical and temporal space in music. Conlon Nancarrow's Player Piano Studies are a collision of two separate temporal spaces combined with the physical space of register: i) the 19th century piano mechanised and ii) 20th century rhythmic/temporal relationships. This is just as much an example of a music theatre as are the Mozart Piano Concertos in which the physical and temporal spaces of the soloist collide with the physical and temporal spaces of the orchestra.

The theatre is in the listening as well as the viewing. Music theatre is the listener's perception of actions in space and also for that matter spaces in action. Finally I shall conclude with the following quote from James Tenney, whose book **The History of Consonance and Dissonance** traces the history of theoretical approaches to harmony from Antiquity to the early twentieth century.

"To a far greater extent than has hitherto been recognised, the Western musical enterprise has been characterised by an effort to *understand* musical sounds, not merely to manipulate them - to *comprehend* 'nature', as much as to 'conquer' her - and thus to *illuminate* the musical experience rather than simply to impose upon it either a wilful personal 'vision' or a timid imitation of inherited conventions, habits, assumptions, or 'assertions'. In this enterprise, both composers and theorists have participated, although in different, mutually complementary ways- the former dealing with what might be called the 'theatre' of music, as the latter its theory. A conception of these as indeed mutually complementary

aspects of one and the same thing is suggested by the fact that both *theory* and *theatre* derive from the same etymological root- The Greek word *theasmai* which was used (I am told) by Homer and Herodotus to mean 'to gaze at or behold with wonder.'³

Footnotes

1. This and the following lecture was originally presented

in a fourth year composition class at the Sydney Conservatorium of Music, 1989.

2. I use the word 'meaning' with caution as it touches on a huge area involving representation, hermeneutics, myth and information theory. This is discussed in the following lecture.

3. James Tenney, *A History of Consonance and Dissonance*, Excelsior Music Publishing Company, N.Y. p.103.

Music and Representation

Richard Vella

"When Kant's transcendental ego and Hegel's Absolute Spirit are consigned to the dustbin of history, there can be no mistaking the consequent triumph of spontaneity. As a result, theory (the contemplation of truth) is replaced by interpretation (a perspectival fiction, masquerading as theory). All thinking is then hermeneutical. As Michel Foucault once expressed, 'the death of interpretation is to believe that there are signs, signs which have a primary, original, real existence. . . . The life of interpretation, on the contrary, is to believe that there are only interpretations.'"

(Stanley Rosen: *Hermeneutics as Politics*, p. 9)

In any attempt to understand music it is necessary to draw the distinction between empirical analysis and analysis via analogy and what models of analysis are being used at any particular point in time. Empirical analysis in music is an analytical method which is based on observation of fact. It attempts to draw relationships between various facts in order to produce a structural understanding of the music or sonic event. For example a particular set of notes may be the inversion of another set of notes; their connection being their intervallic order. An empirical analysis is useful in understanding the relationships between the musical parameters and how these parameters define form.

Hermeneutics addresses the problem concerning the relationship between empirical analysis and analogy. It enables the logic of one system to become analogous (representational) to the logic of another system when clearly both systems have completely different logics. In other words, how does one system of signs (in our case: music) become representational of another system of signs (numbers, ideas, programmatic, film images, texts, etc) and still retain its autonomy as an independent system? In the case of music, what processes occur such that we still call it music?

Representation

"...Such is credulity. Not that the incredulous person doesn't believe in anything. It's just that he doesn't believe in anything. Or he believes in one thing at a time. He believes a second thing only if it follows from the first thing. He is nearsighted and methodical, avoiding wide horizons. If two things don't fit, but you believe both of them, thinking that somewhere, hidden, there must be a third thing that connects them, that's credulity. Incredulity doesn't kill curiosity; it en-

courages it. . . . As long as you don't believe in them, the collision of two ideas - both false - can create a pleasing interval, a kind of diabolus in musica. I had no respect for some ideas people were willing to stake their lives on, but two or three ideas that I did not respect might still make a nice melody. Or have a nice beat, and if it was jazz, all the better." (Umberto Eco, *Foucault's Pendulum*, p.49 -50)

In music anything can be related to anything else if one tries hard enough. By substituting one system for another, be it pitch with rhythm, style with cultural associations, direct imitation of a sound within a musical text, etc, a composer has adopted or constructed a set of assumptions which articulate a certain political/perspective/philosophical belief about music. Most of the time this is taken for granted and so often goes unquestioned. If unquestioned this leads to the perpetuation of half truths, myths and ignorance, even falsities. Unfortunately the limitations of space prevent me from discussing the role of myth in music as it plays a very important role in representation.

Types of representation (the role of difference)

There are many types of representation, each different to the other due to the role 'difference' plays between the 'original' and the 'copy'. To name just a few: imitation, mimicry, simulation, onomatopoeia, parody, metaphor, metonymy, parable, allegory, naturalism, 19th century realism, appropriation, quotation. Each one of these sounds is a different approach to representation (reality/truth). What is common to all is the fact that something is used to stand for something else. What makes them individual is the role of their difference. The 'copy' of the original (model) expresses a particular perspective towards the original (model). A way of knowing/seeing/hearing. A truth, but not the truth. A form of reality. (The various approaches to sound production over last fifty years regarding 'naturalism' in film and radio is an example of this type of construction).

However a contradiction is implied: something is meant to be something else and yet at the same time we know it is not. This is the basis of Theodore W. Adorno's work: how is something not what it is meant to be? His analytical method attempts to show the 'what is' by 'what it is not' and how the 'what it is not', by substitution, becomes 'what it is' (i.e. dialectical analysis). Take for example his statement: "those who consider themselves apolitical are really the most

political". This means that those who do not have a political interest are the ones who are the most manipulated and in doing so become a political group to be manipulated by politics. By what 'they are not' they become the opposite of 'what they claim to be'. It is in the understanding of how something is constructed in itself that we are able to see how it is being used to be something else. (This is Adorno's complex theory of representation - for a more thorough investigation of Adorno's work see Mihai Spariosu, (ed.) **Mimesis in Contemporary Theory**.)

In music we do this all the time; How does one thing represent something else in music and yet at the same time still live up to our expectations of music? Leonard Meyer's essay "Meaning in Music and Information Theory" (in **Music the Arts and Ideas**, p.6) addresses this problem. He distinguishes between two types of meaning in music: *designative* and *embodied*. 'Designative' meaning is when a stimulus refers to something or concept outside of itself, i.e. extra-musical meaning. 'Embodied' meaning is when a stimulus refers to itself. In other words, one event brings about the occurrence of another event. Meyer later goes on to write that as long as music has an uncertainty principle we as listeners will never tire of the information being presented. In other words by placing the musical sign in a constantly changing context we continually reappraise the information so that it doesn't become redundant. Consequently, we are informed about the object and about ourselves. Such is the nature of music which is completely imitative as opposed to a music which is referential to something else and yet at the same time retains its internal musical meaning to its own discourse.

Honegger's **Pacific 231** is not a program of a fast train, but rather a musical model of speed. It is not a train but an analogy using its own technical parameters. Consequently it is not about a train at all but really about musical understanding of motion. The music becomes a way to understand the reality of something else, it refers but it cannot directly be the referent. It is its own referent. In other words a presence of ambiguity (uncertainty) in our listening of the music such that it is what it is referring to and yet at the same time it is not.

Imitation, Realism and Representation

In **Realism in Nineteenth Century Music** Carl Dahlhaus discusses the concept of 'realism' saying that it is very problematic to use the term in relation to music (chapters 1 & 2). However given that, he goes on to list various approaches to the term (chapter 3). In this list Dahlhaus refutes each of them as being a theory of realism, however their value lies in helping us categorise some of the various approaches. Again I must stress that all musical representation is completely arbitrary and is a construction by the composer or listener. Therefore, according to Dahlhaus, the belief that music is a realistic art is naive and ludicrous. I have abbreviated this list and added further comments:

1) *simple imitation of (non-musical) sounds*: eg. the use of 'onomatopoeia' in music.

2) *music is credited with the ability to represent spatial (physical or psychological) and temporal movement*. In other words: qualities. High and low, fall-

ing and rising, fast and slow, light and dark, etc.

3) *Musical representations of speech intonations*. The history of music is also the history of the voice and its representations.

"Of the various ways in which man may have become conscious of music - by blowing, banging or scraping - the use of his own voice is the most basic. We all have some music in ourselves - pitched sounds, at least, and rhythm. Common sense and common experience suggest that the earliest urges towards music, organised sound, may accompany regular movement (dance, marching, rocking a cradle) or may arise from speech. Not from all speech, however, but from certain kinds - the heightened speech of ritual and cult, the impersonal speech of heroic narrative, perhaps the anguish of pain and the release of joy (the dirge and the Alleluia)."

(John Stevens, **Words and Music in the Middle Ages**, p.268)

4) *Musical depiction of the emotions*. The following quote by Schopenhauer best explains this approach.

"Music, unlike all other arts, does not represent ideas or phases in the will's objectification, but rather represents the will itself with nothing intervening. This is the basic reason, moreover, why music acts directly on the will, that is on a listener's emotions, passions and affections, quickly elevating or even transforming them. . . from this symphony (*Beethoven*) all human passions and affections speak at once: joy, sorrow, love, hate, fear, hope, etc., in countless nuances, yet all as if in the abstract without any particularising: it is their pure form without matter, like a world of spirits without material." (Schopenhauer, "The World as Will and Representation," in **Esthetics of Music**, by Carl Dahlhaus, p.42)

5) *Etymology as a mode of thought* referring to musical symbolism associated with words: the BACH motive in German music of the 19th century where BACH equated the notes B-A-C-B flat.

6) *Musical as a mirror of the structure of the world ordered according to 'proportion, number and weight'*.

"But if sounds are the *materia*, 'number' is the *forma* - or . . . the *ratio* behind the *sensus* . . . In plain language, the musician did not set the words of the poem to music; he set its pattern. It was this pattern, a purely numerical structure of stanzas, lines and syllables, which preceded both the melody and the poem. The pattern had to be realised in two media - the medium of words and the medium of notes - and it did not matter in the least which was realised first." (John Stevens, **Words and Music in the Middle Ages**, p. 499)

In any piece of music, the above six 'realisms' may all be present. They are not fixed and can only be even momentary. A musical text is like any other text: multilayered, multi referential, multi historical.

Mimesis

"The term 'mimesis' is generally used either to describe the relation between art and nature, or more recently, reality (in turn defined in a number of ways), or to describe the relation governing the works of art themselves." (Spariosu, op. cit. p.1)

Mimesis is the expression of a 'reality' by the

relationship between a 'model' and an 'imitation', or subject and object. Instead of using the term 'reality', a more appropriate term is 'truth' (see Dahlhaus, p.11). According to Spariosu (above) there are two types of mimesis: Platonic and Pre-Platonic. Pre-Platonic mimesis is non-imitative, coming from myth and ritual. It is about the Dionysian, the ecstatic, the being (eg: Shamanism, totemism, incantations, etc). Platonic mimesis is about the imitative imperfect being idealising the perfect, the copy striving to be like the original which is no longer accessible. Pre-Platonic mimesis is sensory; Platonic mimesis is conceptual (Apollonian).

It is easy to see why people have problems with music and meaning if both of these aspects are not taken into account at the same time. In other words music is representational *and also* non-representational (i.e. conceptual and sensory): (i) When we talk of music being representational we are referring to Platonic mimesis. (ii) music as a non-representational art is an example of Pre-Platonic mimesis. There are many examples of the Pre-Platonic mimetic approach; many of them are closely related to dance (Dionysius); it being the physical manifestation of the sonorous, the physical experience.

The Pre-Platonic esthetic has become more and more predominant in the latter half of the twentieth century. As we move from a heavily coded system of signs with specific meanings, 'meaning' begins to negate itself, imploding in on itself as multiple meanings become omnipresent, producing 'meaninglessness'. Consequently in this age of skepticism and cynicism the *experience* of the object becomes more important than its meaning.

Neoclassicism, Modernism, Postmodernism

From a musical perspective the construction of 'truth' can be seen in the attitudes to 'Neo-Classicism', Romanticism/Modernism, and Post-Modernism. Neo-Classicism places an authority in an a priori 'truth' greater than the artist. Romanticism/Modernism holds that the artist is the 'truth' (i.e. the concept of genius). Post-Modernism is cynical of all truths, arguing that there can be no such thing as truth since all truths are a construction based on ideology. Hence the reason for the existence of 'multiple truths'/multiple theories. It is not necessarily about eclecticism as music by its very nature is eclectic in structure: eg. the multiple styles in Mozart's *Don Giovanni* or Monteverdi's *Orfeo*. Postmodernism in music is an open acknowledgement of the Dionysian (sensory/experiential) as well as the Apollonian (conceptual/meaning). It claims that no one theoretical discipline is able to cope with the realities of life: its contradictions, gaps, inconsistencies, multiplicities. In announcing the 'meaninglessness' of signs it is at the same time obsessed with 'a search for meaningfulness' hence the need to give meaning to experience.

For many writers, John Cage's work has been considered to be the apotheosis of the Pre-Platonic side of Postmodern theory in music as it is about the pleasure of the moment (the sonic). It denies a teleological (causal) approach by severing or ignoring constructed relationships. Meanings which are found are purely there because the listener has 'found'

them: i.e. given meaning to the events. Cage's music is about the celebration of the listener. Sound is unleashed and meant to be heard as sound existing in a Dionysian play with other sounds.) Certain quarters of Postmodernism also provide us with a language not available within the Modernist approach to analysis. For example, Modernist analysis in music does not deal with psychoanalytic models of the 'body' or the 'corporeal', it being only concerned with the musical matter one hears and how it is constructed. Conversely, analysis usually associated with form and structure is also very useful in a Postmodern reading of a work. Stravinsky's work may originate from a sensory base, as he says of his compositional process, but it is also structural in form.

Musical Technique and Representation

It is essential not to confuse musical technique and structure with the role of representation in music. What we define as music is based on technical considerations, eg. the perception of rhythm, register, melody, sound, contrast, tempi, phrasing, etc. This is the above mentioned 'embodied meaning' from Leonard Meyer: "a stimulus or process may acquire meaning because it indicates or refers to something which is like itself in kind" (Meyer, p.6). In other words, this type of musical meaning refers to itself. Representation here is only concerned with representation of the musical process. For example: a consequent phrase in a period form only has meaning because of the presence of the antecedent phrase. (Another example are the structural relationships of the repeated high register notes in the first movement of Webern's opus 27 to the repeated low notes.)

It is in the distinction between 'embodied' representation and designative 'representation', and how these representations are organised within a work which makes us define a music to be within a particular esthetic although even this can sometimes be a bit tenuous if taken literally.

Music as a mirror

In the light of this brief discussion concerning the presentation of reality/truth I hope it is possible to understand the complex relationship between music and representation (mimesis). Let us call the process of representation the sonic mirror. Some sonic mirrors are literal, e.g. onomatopoeia, others are more formal (abstract) mirrors. Some are openly 'fraudulent' such as sampling, others assume a 'truth' such as very expensive recording techniques. It is in the role of the 'difference' that we observe the function of the mirror (i.e. the relationship between the model and the copy). Eg: the recognition of the use of word painting, irony, satire, allegory, parody, cliché, sampling, etc. Each of these 'mirrors' represents a particular point of view by the composer which is combined with the musical texture in order to provide a particular insight into a 'truth/reality'.

"...all those mirrors. Wherever you see a mirror - it's only human - you want to look at yourself. But here you can't. You look at the position in space where the mirror will say 'You are here, and you are you,' you look, craning, twisting, but nothing works, because Lavoisier's mirrors, whether concave or

convex, disappoint you, mock you. You step back, find yourself for a moment but move a little and you are lost. This catoptric theatre was contrived to take away your identity and make you feel unsure not only of yourself but also the very objects standing between you and the mirrors."

(Umberto Eco, *Foucault's Pendulum*, p. 13)

Analyses and Commentaries

The following analyses will look at two songs from Schoenberg's *Pierrot Lunaire* and Kurt Weill's *Can- on Song* from the *The Threepenny Opera*. They will use empirical analytical methods combined with hermeneutical approaches.

1) *Serenade*, No. 19, from Schoenberg's *Pierrot Lunaire*

With grotesquely giant-sized bow
Pierrot draws cat-squeals from his viola.
Like a stork on one leg balanced,
He plucks a doleful pizzicato.
Out pops furious Pantaloon
Raging at the night-time virtuoso
With grotesquely giant-sized bow
Pierrot draws cat-squeals from his viola
So the player drops his fiddle
Delicately, with his skilled left hand
Grabs old baldy by the collar
And dreamily plays upon his pate
With grotesquely giant-sized bow.

Schoenberg's use of the violincello instead of the viola automatically avoids the obvious reference in the text. The whole range of the cello is used to represent the sweeping grotesqueness of his bowing. For the dark low range see bar 25 also referring to the virtuosity of Pierrot in the text at 29. Again the displacement of the word association is far enough to function more as a memory and so avoid a cheap imitation. For the cat squeals of his viola, notice from bars 30 to 33 the use of the cello's top register. Again Schoenberg does not represent cat squeals, but rather portrays, in a rapsodic three/four meter Pierrot's intensity of playing, his passion.

At bar 38 notice how the music implies a more assertive two/four metric structure as Pierrot bows his viola bow on Pantaloon's head. The two/four slapstick allusions are obvious. Notice that the word *pizzicato* is never accompanied by the sound of a pizzicato in the cello directly - this only occurs at bar 10, 11 and 12 establishing it in our memories for when the singer does sing the word at bar 21. The waltz introduction acts as a prelude, a musical example of what the singer is about to tell us. The music hides behind the masquerade of a cello to tell us about Pierrot's viola playing. The musical accompaniment of the 'Serenade' achieves an independence to the text which refers to the text but still retains its own musical autonomy.

2) *Der Mondfleck*, No. 18, from Schoenberg's *Pierrot Lunaire*

With a fleck of white - bright patch of moonlight
On the back of his black jacket.
Pierrot strolls about in the mild evening air
On his night-time hunt for fun and good pickings.
Suddenly something strikes him as wrong,
he checks his clothes over and sure enough finds
A fleck of white - bright patch of moonlight-

On the back of his jacket.

Damn he thinks, there's a spot of white plaster!
Rubs and rubs but cant get rid of it,
So goes on his way, his pleasure poisoned,
Rubbing and rubbing till dawn comes up -
At a fleck of white, a bright patch of moonlight!

A close examination of the music reveals two canons between: (i) the viola and cello and (ii) the piccolo and clarinet. Why has Schoenberg used canons in this song? Is it purely for reasons of generating the music. Obviously yes, but then there are many other formal processes which could have done so as well. *Pierrot Lunaire* is about a Pierrot who looks at the moon and sees his own reflection. The work is literally scattered with various types of canons. In a sense the *comes* is the reflection of the *dux*. One part following (reflecting) the other. Furthermore a close look at these two canons reveals that they are both retrogradable around mirror points. Canon (i) the viola and cello at bar 9, on the fourth quaver; canon (ii) piccolo and clarinet, at bar 10 on the sixth semiquaver.

The text refers to a white moon fleck on his back following him. Note the canon in the viola and cello. Here is an example of word painting in that the short-demi semi quavers are obviously referring to the irritating moonfleck. However it is not such an obvious equation because this rhythmically persistent moonfleck is continually regenerated by the use of the canonic devices explained above. Again the use of a canon seems highly appropriate in that one part is following the other: the moonfleck on his back. Note also that the mirror points for both canons occur when Pierrot checks his back. He turns around and looks back; the canon turns around and looks back. A closer look at the piano part reveals that it also is canonic. Compare bar one right hand with bar two left hand.

Pierrot Lunaire and its cultural context

Pierrot Lunaire is not only about words and music but is also a collision of diverse esthetics. It is sophistication combined with decadence. The composition is considered to be an ironic cabaret work obviously referring to the German cabaret of the period. Schoenberg's singing direction, as revolutionary as it is in the Western repertoire, is also not too far away from the cabaret singing style of the late nineteenth century. In this work Schoenberg has collided two very oppositional esthetics:

- i) the developmental formal processes of the German art music tradition, and
- ii) the popular musical forms of the day found in cabaret.

Hence the work produces an irreconcilable contradiction. Popular forms rely on repetition as a main means for communicating musical ideas, however Schoenberg's own musical style was based on continual variation. To repeat something exactly was anathema to Schoenberg which is why the music from this period is so transparent, fluid and mobile. Non-repetition produces a sense of amorphousness, vagueness, indefiniteness. We must also remember that this period of composition was heavily influenced by the intellectual spirit of its times. Freud's theories on hallucination are an appropriate reference point. Schoenberg's work from this period can also be perceived as musical hallucinations; musical visions.

(see opus 19, opus 16 in particular). **Erwartung** (op. 17) can be considered to be the apotheosis of this free association esthetic as it is about a woman searching for her absent lover:

"Past and present merge into one another as fright, longing, jealousy and exaltation, sense impressions and memory associations, pass through her stream of consciousness. . . she mistakes a tree trunk for a body" (Malcolm Macdonald, **Schoenberg**, p. 183)

Pierrot Lunaire is another example of this hallucinatory process. Fragmented melodies, notes freely combine (associate) with other notes, momentary ruptures, grotesque shapes and images, a sense of the formlessness, although beneath all of this lies a rigorous approach to form as seen in the above discussion on **Serenade**. Since **Pierrot Lunaire** is about a moondrunk, hallucinating Pierrot it seems appropriate that its musical surface complements the poetic text with its own hallucinatory compositional style.

3) *Song of the Heavy Canon* from **The Threepenny Opera** by Kurt Weill.

This song is a perfect example of what Brecht calls 'musical gest': the music takes an attitude towards the text and presents this attitude. The song makes a pun on the word canon as it refers to Macheath and Brown singing about a soldiers' life with canons. Here is the first dramatic twist - the music uses a canonic structure in the verse. This coincides with Dahlhaus' fourth definition of musical realism: the use of etymology. In actual fact this piece is an etymologists delight in that Macheath (head of the criminal underworld) begins to sing the *dux* of the canon, and is followed by Brown (chief of police), who sings the *comes*. The canon, which is also a period structure, as a form makes a satirical comment on the relationship between Macheath and Brown: one (*antecedent/dux*) followed by the other (*consequent/comes*).

The song begins with a foxtrot whose theme is in canon. This quickly slips by way of a cycle of fifths progression (Db-G-C-B-E) using quasi augmented sixth chords (A - D flat - E flat - G, & C - F# - B flat) to the soldiers' march. The foxtrot was considered to be a sleazy popular dance. One could even extrapolate that the very name foxtrot suggests two very cunning characters (Macheath and Brown) dancing in canon ("as cunning as a fox"). Notice how the foxtrot reenters at the end of each verse functioning as a musical comment to the soldiers' life of thuggery and murder. The song is a satirical death dance juxtaposing a hedonistic leisure activity (dancing represented by the sleazy foxtrot rhythm) with professional soldiers who kill for a living (march rhythm). Such is the bite in the words "Soldaten wohnen auf den Kanonen", (what soldiers live on is heavy canon). The opposition between the two rhythms, one syncopated the other straight downbeats, achieves a synthesis in the final chorus. Both rhythms are juxtaposed as the soldiers march becomes a dance of death.

Harmonically the song juxtaposes chords based on fifths (027 type chords) with chords based on tritones (in particular 026 harmonies). Although the song uses tonally based chords (French augmented sixth type chords), they are used in a non-functional way by avoiding cadences, juxtaposing consonant chord sets with the more dissonant chords. Key sec-

tions are present however: the foxtrot sections have a D tonality; the march is in E while the chorus is basically centered around F sharp. Each section of the piece starts off relatively simply harmonically and ends with an accumulation of pitch information often presenting two sets of harmonies inconsistent with each other which is the song's harmonic dialectic: foxtrot versus march. Notice also the use of parallel perfect fifths on the words "vom Capis Couch Behar" signifying the exotic life of a soldier as they travel from country to country. The bass lines follow a relentless standard I - V - I march progression. Only in moments is it in accordance with the upper voices consequently creating a harmonic tension which rarely resolves itself. Note also the tonalities referred to by the bass line progression throughout each verse of the song: D-E-F#-(G#). Just as the rhythmic component is at its most unstable in the final chorus so also is the harmony. (Fig 1 of score: tritones and fifths in juxtaposition). The juxtaposition between (i) the 'demoniac' tritone which symmetrically divides the octave into two halves creating harmonic instability in a tonal context, and (ii) the seductive, exotic fifths combine harmonically to represent an analogy to the soldiers life: murder plus travel.

Conclusion

This has been an overview and introduction to the complex world of representation (meaning) in music. What we call music in our culture is a complex interaction between the sensory and the representational (conceptual). This lecture has focused on the representational side of music: the construction of 'meaning' even though I hope we do not forget that music is also essentially sonorous and non imitative. To make a dialectical observation in the style of Adorno: music, in being not representational of anything is capable of being representational of anything. The final part of the paper has been to demonstrate the use of musical technique and the application of analogous 'meanings' to this technique. Each area discussed is worthy of a chapter in itself: eg, mythology and music, Brecht's concept of Gest and Alienation, musical techniques in representation such as orchestration, narrative techniques, the role of style, sound production and realism, parody, irony and other literary forms in music.

Readings

- 1) Words and Music in The Middle Ages, John Stevens
- 2) The Film Sense, Sergei Eisenstein
- 3) The Work of Art in the Age of Mechanical Reproduction, Walter Benjamin, in 'Illuminations'.
- 4) Hermeneutics and Politics, Stanley Rosen
- 5) Music, the Arts, and Ideas, Leonard B. Meyer
- 6) Image-Music-Text, Roland Barthes
- 7) Mimesis in Contemporary Theory, Mihai Spărosu
- 8) Realism in Nineteenth Century Music, Carl Dahlhaus
- 9) Alternative Voices, Istvan Anhalt
- 10) Postmodernism, ICA Documents
- 11) Film Sound, Elizabeth Weiss & John Belton (eds)
- 12) Schoenberg, Charles Rosen
- 13) Schoenberg, Malcolm MacDonald
- 14) Brecht on Theatre, John Willett (ed)
- 15) Foucault's Pendulum, Umberto Eco
- 16) Aesthetic Theory, T.W. Adorno
- 17) Esthetics of Music, Carl Dahlhaus

etc.

Currency Press launches music series

Currency Press has announced a new program of music publications concentrating on the pedagogical and performance aspects of Australian music. The priorities of the series, according to general editor Richard Vella are to introduce Australian role models in music to performers of all ages, and hence extend the available repertoire; and to establish an outlet for scholarly publications and promote a standard of writing about Australian music which can also be read by non-musicians.

This is a brave new initiative which to my knowledge no local publisher has been willing to undertake on a similar scale because of the difficulties of finding a market for what is, unfortunately, still regarded as limited interest material.

It is a well-timed venture. Just as the ABC is beginning to realise that there is indeed a high level of interest in new Australian music on the airwaves (the problem having been, it seems, to do with unsympathetic programming) it has taken a publisher like Currency to realise the potential of this interest to translate into sales of printed material.

The series was launched in July with **Australian Guitar Solos**, a collection of 13 guitar pieces graded in order of difficulty. Remarkable is the diversity of material contained within it, and that the book (finally!) introduces a new generation of composers to the wider public. The pieces have subsequently been recorded and broadcast by the ABC, and the publication has already been well received in America.

The guitar anthology was followed in September with **Australian Piano Music vol. 1**, edited by Sally Mays. This is the first of a planned series of seven, progressively-graded volumes to be released over the next few years.

The long term nature of the program is what sets it apart from the more sporadic contributions of Australian publishers over the past few years. It indicates a commitment to developing a framework for musical literacy including distribution, education, broadcasting, writing and performance at all levels.

The pedagogical approach of the program provides its basic structure and will no doubt be ultimately responsible for its success. A number of needs are being addressed, including

- i) the need for Australian work in the existing competitions around the country,
- ii) the need for inclusion of post 1965 work in the year 12 syllabus,
- iii) augmentation of Australian content in the AMEB lists.

While most of the work being published is relatively recent, there are also contributions to an earlier period of our history including Alison Gyger's **Opera for the Antipodes**, a history of opera from 1880 to 1939. Already in the pipeline are Miriam Hyde's autobiography **Complete Accord** and Margaret Sutherland's **Sonata for Clarinet or Viola** (1947).

Future publications will include a **Recorder Anthol-**

ogy (ed. Ben Thorn), a collection of **Australian Organ Works** (ed. David Kinsela), Larry Sitsky's **Century Piano Project** (ed. Michelle Linton France) and **Tubaphonics**, an anthology of tuba pieces (ed. Ray Marcellino). These should fill a few gaps in the present AMEB syllabus and provide it with a humane dose of much needed Australian content. Also planned is a book of essays by musicologist Jamie Kassler entitled **Metaphor: a Musical Dimension**.

The series deserves to be supported and we wish it every success.

Ear-jacks in batteries

R. Watson

ITEM: A senior nutritionist attached to a prominent Melbourne think-tank has suggested the phasing-out of food which hasn't been pre-cooked and pre-packaged. 'Only take-aways are relevant now', he said, which is bad news indeed for restaurant staffs'.

It is worth considering, as we observe the new citizen bobbing about in the technocratic soup we call the *multi-functionpolis* that his predecessors had not always been lot-fed; indeed they once ranged almost freely, picking and choosing as they wished, with mere social, cultural, educational, gender and age constraints operating on them. The citizen would release himself from time to time to indulge in the pursuit known as 'Eating Out'.

Call it multi-culturalism, call it a cunning smoke-screen, man could take his meat then much as he would take his music - frequently, in small doses, in many different places, whilst otherwise occupied. In fact he would frequently take it away, back into his own yard. The decision to introduce lot-feeding came about when it was observed that citizens had already developed a proclivity to not go out and forage for themselves at all - to get their food not just pre-cooked, but often pre-digested, as if in an act of categorical putrefaction, the turgid music-stuff one could hear in food outlets was deliberately, rhythmically masticating the product before sending it out.

Further upmarket, there had been some smartly packaged collations available: mystic dance-video pizzas; or gala event dinners from the great museums, the sobbing and singing direct from the Paris garret and the Bolshoi dancing around a magnificent spread for La Traviata. After he had supped, the armchair participant in this opulent transduction could smack his lips and utter 'Verismo' to his mate. It is strange to say that, in forgetting how to cook, the citizens were helping to institute a hotter culture. Dyspeptic in the dynamic cookhouse of production, they yet hankered for nothing so much as what seemed to be the main event - the rich gustatorial indulgence from the great houses, with huge staff, classical dishes reprised, leonine maitre d' waving his arms about (direct from the continent) etc. Such events were restricted owing to the level of funding required (for diners and restaurateur). Nevertheless, citizens could often procure samples, or read about it in the 'having' columns in the popular press.

But one only gets to take the quality stuff on birthdays, and back at the workplace, the young and the restless continued to want to eat out every other night. It was as if eclecticism had been franchised! Citizens sampled Creole with their King, Jamaican with their herb, even Koori with their grub. Better informed avantists, secure in the knowledge that the prevailing diet was unhealthy, opted for alternatives not just in terms of content, but in preparation - even germinative processes were reviewed. Concept was all. Eating out meant imbibing a new or novel concept each course. All prejudice would be laid aside, and while some items proved hard to swallow, and often raw, the trick was to approach them holistically. To avoid the 'gatecrashers in the restaurant' syndrome, new venues were called for, which further reduced the already meagre Gemeinschaft (tónies) input. Every solipsist needs a bit of wind in his sails, and there is always a lot of that emanating from the commercial quarter, to fan the fires for the necessary 'cooking'. As if in anticipation, some poor souls retreated deep into the forest and began retrieving pure, cold water.

In cases of marked absurdity, radical cooks attempted to shock diners out of their complacency by putting before them dishes which were intentionally unpalatable; or they would slaughter the fowl in the diners' presence before serving it - a foolhardy demonstration attempting to bring home an effect of complicity. Ironically they were correct in this, for they were as much a symptom of the larger societal problem which had to be addressed...

In the end, as is usual with most significant social engineering developments, the impact of lot-feeding caused barely a ripple. Indeed, owing to factors outlined above, there was an inherent degree of complicity apparent in all citizens. And there was the blindness of the intelligentsia to the importance of pleasure (which is not the same as comfort) and visceral desire (appetite). There was the unacknowledged presence of myth in the face of an obsession with systems: no attempt had been made to expropriate the talents of the saucier. Without the cultural phenomenon - sauce - working its melding and reconciling qualities on the cuisine, diners finish up looking for the vomitory.

Meantime, the oblivious *multifunctionpolis* citizens slip from one phase of sensuality into another: from red hot Messicana into Quatro Gusti alla Vivaldi, from sex and drugs into ease and comfort. It is supply-side pleasure with musical accompaniment from the cradle to the grave, A/c c/- the great proxy franchise holders. The State could never hope to match the funding, it merely keeps to its charter of defining the bounds of nourishment and nourishment's erudition. Here jogs another walkman-encased citizen now. The lot-feeding has been a great success.

New Improvisation book from OUP

Roger Dean, who will be known to Sydney audiences through his performance group *Australysis*, has come up with a timely book on the rudiments of improvisation. Subtitled 'How to develop techniques of improvisation for any musical context', it is a book designed for those with some knowledge of notation and a basic facility on any pitched instrument, which should appeal to most people interested in structuring their facility to improvise.

The first section of the book covers general techniques based on the modification of given musical materials, and

continues with considerations of pitch, harmony, rhythm and onto timbre and texture. Section 2 considers the notion of interaction with other musicians during improvisation, and from there the book explores various contexts, drawn mainly from the Western musical tradition, in which improvisation can occur. There is a copious use of musical examples and a cassette tape accompanies the book, although this was not to hand.

The book should be most welcome in academic courses, since it offers a compendium of techniques on how to realise improvisatory elements within modern scores: graphic and text compositions, mobiles and so on.

As we survey the broad outline of twentieth century music it is becoming increasingly clear that a non improvising musician is only half a musician: in these days of HECS a student who leaves a tertiary course without having covered at least the groundwork of improvisation in contemporary styles should consider that he/she has received only half an education.

This is a much needed book which deserves to have impact on instrumental teaching in our schools.

Roger Dean:

Creative Improvisation: Jazz, Contemporary Music and Beyond ISBN 0335 09700 6

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